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# the configuration of fop

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## 1. install asciidoc and fop

- install some softwares run command:

```
$ emerge asciidoc fop source-highlight
```

## 2. configuration of fop for outputting chinese pdf

### 2.1. use the TTFReader to make font metrics

use the TTFReader to make font metrics. (see: setup fop font [<http://xmlgraphics.apache.org/fop/0.95/fonts.html>])

- about TTFReader

[quote, apache.org]

FOP includes PFMReader, which reads the PFM file that normally comes with a Type 1 font, and generates an appropriate font metrics file for it. To use it, run the class `org.apache.fop.fonts.apps.PFMReader`:

Windows:

```
java -cp build\fop.jar;lib\avalon-framework.jar;\
      lib\commons-logging.jar;lib\commons-io.jar \
      org.apache.fop.fonts.apps.PFMReader [options] pfm-file xml-file
```

Unix:

```
java -cp build/fop.jar:lib/avalon-framework.jar:\
      lib/commons-logging.jar:lib/commons-io.jar
      org.apache.fop.fonts.apps.PFMReader [options] pfm-file xml-file
```

In my enviornment, use it easily by a shell.(save the following as a shell)

```
#!/bin/sh
```

```
java -cp /usr/share/fop/lib/fop.jar:\
```

```
/usr/share/avalon-framework-4.2/lib/avalon-framework.jar:\
/usr/share/commons-logging/lib/commons-logging.jar:\
/usr/share/commons-io-1/lib/commons-io.jar:\
/usr/share/xmlgraphics-commons-1.3/lib/xmlgraphics-commons.jar\
org.apache.fop.fonts.apps.TTFReader $*
```

- make font metrics

```
$ ./TTFReader -ttcname SimSun /usr/share/fonts/MS_fonts/simsun.ttc ./simsun.xml
$ ./TTFReader /usr/share/fonts/MS_fonts/msyh.ttf ./msyh.xml
$ ...(make others fonts metrics)
```

- register Fonts with FOP make a the file named *fop.xconf* look like listed. [see: fop.xconf]

```
<font>
<!-- embedded fonts -->
  <font metrics-url="/etc/fop/simsun.xml" kerning="yes"
        embed-url="/usr/share/fonts/MS_fonts/simsun.ttc">
    <font-triplet name="SimSun" style="normal" weight="normal"/>
    <font-triplet name="SimSun" style="normal" weight="bold"/>
    <font-triplet name="SimSun" style="italic" weight="normal"/>
    <font-triplet name="SimSun" style="italic" weight="bold"/>
  </font>
<font metrics-url="/etc/fop/simhei.xml" kerning="yes"
        embed-url="/usr/share/fonts/MS_fonts/simhei.ttf">
  <font-triplet name="SimHei" style="normal" weight="normal"/>
  <font-triplet name="SimHei" style="normal" weight="bold"/>
  <font-triplet name="SimHei" style="italic" weight="normal"/>
  <font-triplet name="SimHei" style="italic" weight="bold"/>
</font>
<font metrics-url="/etc/fop/wqy-zenhei.xml" kerning="yes"
        embed-url="/usr/share/fonts/wqy-zenhei/wqy-zenhei.ttc">
  <font-triplet name="WenQuanYi Zen Hei" style="normal" weight="normal"/>
  <font-triplet name="WenQuanYi Zen Hei" style="normal" weight="bold"/>
  <font-triplet name="WenQuanYi Zen Hei" style="italic" weight="normal"/>
  <font-triplet name="WenQuanYi Zen Hei" style="italic" weight="bold"/>
</font>
<font metrics-url="/etc/fop/wqy-zenhei-mono.xml" kerning="yes"
        embed-url="/usr/share/fonts/wqy-zenhei/wqy-zenhei.ttc">
  <font-triplet name="WenQuanYi Zen Hei Mono" style="normal" weight="normal"/>
  <font-triplet name="WenQuanYi Zen Hei Mono" style="normal" weight="bold"/>
  <font-triplet name="WenQuanYi Zen Hei Mono" style="italic" weight="normal"/>
  <font-triplet name="WenQuanYi Zen Hei Mono" style="italic" weight="bold"/>
</font>
<font metrics-url="/etc/fop/msyh.xml" kerning="yes"
        embed-url="/usr/share/fonts/MS_fonts/msyh.ttf">
  <font-triplet name="Microsoft YaHei" style="normal" weight="normal"/>
  <font-triplet name="Microsoft YaHei" style="normal" weight="bold"/>
  <font-triplet name="Microsoft YaHei" style="italic" weight="normal"/>
  <font-triplet name="Microsoft YaHei" style="italic" weight="bold"/>
</font>
<font metrics-url="/etc/fop/wqy-microhei.xml" kerning="yes"
        embed-url="/usr/share/fonts/wqy-microhei/wqy-microhei.ttc">
  <font-triplet name="WenQuanYi Micro Hei" style="normal" weight="normal"/>
  <font-triplet name="WenQuanYi Micro Hei" style="normal" weight="bold"/>
  <font-triplet name="WenQuanYi Micro Hei" style="italic" weight="normal"/>
  <font-triplet name="WenQuanYi Micro Hei" style="italic" weight="bold"/>
</font>
<font metrics-url="/etc/fop/wqy-microhei-mono.xml" kerning="yes"
```

```
        embed-url="/usr/share/fonts/wqy-microhei/wqy-microhei.ttc">
    <font-triplet name="WenQuanYi Micro Hei Mono" style="normal" weight="normal"/>
    <font-triplet name="WenQuanYi Micro Hei Mono" style="normal" weight="bold"/>
    <font-triplet name="WenQuanYi Micro Hei Mono" style="italic" weight="normal"/>
    <font-triplet name="WenQuanYi Micro Hei Mono" style="italic" weight="bold"/>
</font>
</fonts>
```

## 3. Configure the style sheet

- see fop.xsl file.

```
<?xml version='1.0'?>
<xsl:stylesheet version="1.0"
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns:fo="http://www.w3.org/1999/XSL/Format">

<xsl:import href="/usr/share/asciidoc/docbook-xsl/fo.xsl"/>
<xsl:param name="paper.type" select="'A4'"/>
<!--<xsl:param name="l10n.gentext.language" select="'zh_cn'"/>-->

<xsl:param name="body.font.family">
  Microsoft YaHei,
  WenQuanYi Zen Hei,
  SimSun,Courier
</xsl:param>
<xsl:param name="monospace.font.family">
  Microsoft YaHei,
  Courier,
  WenQuanYi Zen Hei Mono
</xsl:param>
<xsl:param name="title.font.family">
  WenQuanYi Micro Hei Mono,
  Courier,
  SimHei
</xsl:param>

</xsl:stylesheet>
```

## 4. Use it

- set option --xsl-file and --fop-opts, if it contain chinese character.

```
$ a2x -f pdf --xsl-file=/etc/fop/fop.xsl \
    --fop --fop-opts="-c /etc/fop/fop.xconf" <asciidoc file>
```