Generating ODF reports on server side

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• ODF Policy in Taiwan
• Case Study on OSOR
• Report generating modules on server
ODF Policy in Taiwan

Promote Government’s Open Document Standards

Develop New Value for Document Circulation

Open data is a vital administrative direction for the government, and the most beneficial standards for presenting the document to the people have a significant influence on the people. The Executive Yuan announced the policy of "Implementation Project for Promoting ODF-CNS16251 as the Government’s Standard Document Format" on June 5th of this year (2015), hoping that all industries may jointly promote the ODF (Open Document Format), as well as participate in the open document standard format of the government in order to enhance our soft power.
<table>
<thead>
<tr>
<th>Q</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do I open files in ODF format (e.g., odt and ods)?</td>
<td>The files may be opened using ODF open software LibreOffice. To download LibreOffice, please click on the following URL: <a href="https://www.libreoffice.org/download/download/">https://www.libreoffice.org/download/download/</a> (New window) Note: Windows users may open files in ODF format using MS Office 2007 or above. However, errors will occur for some symbols and calculation formulas.</td>
</tr>
<tr>
<td>Where to Begin?</td>
<td></td>
</tr>
<tr>
<td>Where is the National Palace Museum? What's the address?</td>
<td></td>
</tr>
<tr>
<td>What are the Museum hours? What days are the Museum closed?</td>
<td></td>
</tr>
<tr>
<td>What are admission prices to the Museum? Are there any special or group discounts?</td>
<td></td>
</tr>
</tbody>
</table>
Case study, Joinup/OSOR, written by Adrian Offerman
That’s clients’ part.
However, we have another problem to solve...
Mostly Used Reports Generating Modules

SAP Crystal Reports: the de-facto standard in pixel-perfect data reporting since 1991.

Buy digitally - full version  Buy digitally - upgrade

With SAP Crystal Reports, you can create powerful, richly formatted, and dynamic reports from virtually any data source, delivered in over a dozen formats, in up to 28 languages. SAP Crystal Reports turns almost any data source into interactive, actionable information that can be accessed offline or online, from applications, portals and mobile devices.
Export Format Types:
The export formats supported by Crystal Reports can be broadly categorized in two groups: page-based formats and record-based formats.

- Crystal Reports (RPT)
- Crystal Reports Read-only (RPR)
- HTML 3.2 and HTML 4.0
- Microsoft Excel (07-2003)
- Microsoft Excel (97.2003) Data-only
- Microsoft Excel Workbook Data-only
- Microsoft Word (97-2003)
- Microsoft Word (97-2003) - Editable
- ODBC
- PDF
- Record Style – Columns with spaces and Record Style – Columns without spaces
- Rich Text Format (RTF)
- Separated Values (CSV)
- Tab Separated Text (TTX)
- Text
- XML
- XML Legacy
Supported Exporting File Format

- No ODF
- So what can users do when they need to hand over ODF reports?
- Convert from doc/docx to odt?
- But when opening it in LibreOffice...
雇主接續聘僱外國人通報證明書（含期滿轉換）

第10621B001465號

兹证明雇主：詠正夫

統一編號：G101271831

外國人接續日期：106年07月05日

原雇主編號：G101102162

原雇主名稱：林隆祺

國籍：印尼 護照號碼：AS706766 性名：SOFIAH 等1名

依外國人受聘僱從事就業服務法第46條第1項第8款至第11款規定工作之轉僱　　
局或工作程序準則（以下簡稱本準則）規定，轉僱雇主接續聘僱外國人通報單、外
It’s actually a HTML file.
Besides the difficulties of "converting" to ODF, there are also other annoying problems...
Problems when generating reports

- No standard format
  - Different departments and system may use different versions/tools
  - Difficult to integrate with other systems
Problems when generating reports

• Maintainance
  – Every single server needs to install one report generating system
  – Difficult to manage multiple servers
● Find out the relative XML structure
● Insert variables which will be replaced by dynamic data
● What if contents or layout changes?
NDC ODF API Service
Brief Setup Steps

1. Create a server
2. Create a report template
3. Upload template and get RESTful API
4. Send HTTP POST from system with data
5. Download the generated ODF
Create a Server

• GitHub: https://github.com/NDCODF/ndcodfapi_service

• NDC demo server: http://122.116.99.182:8880/odfapi/
Create a Report Template

• Template design wizard
  – An extension for NDC ODF Application Tools and LibreOffice
  – https://www.ndc.gov.tw/cp.aspx?n=32A75A78342B669D&s=0E6E547DECCF0FBB
• Add some description for the template
  - This template is for system maintainers (report generators) to use, so the description of the fields and the document should be clear to them.

• Get the API URL which will be used to send report data
Send HTTP POST

• Use swagger.io to simulate the server side behavior
• The result URL would be able to send directly and save the output as report.odt
• And it's done.
Reports generating flow

I want this and that reports

1. Generate API
2. Call API and fill data
3. Generate ODF file for download
4. Upload templates
5. Generate ODF file
6. I want this and that reports

sysadmin

ODFAPI server
Advantages

• The server side does not need to rewrite the whole report generating module, just calling the API server to get a report.

• It does not matter which programming language the server uses, since it just require HTTP POST to get report.
Advantages

• The server does not need to maintain / upgrade report generating tools (and can save a lot efforts)

• The report generators do not need to study / dig into XML code and find where to replace, and do not need to worry about the content layout either.
Advantages

• Everything would be defined in the report templates, generated by the users who really needs the report.
Thank you for listening!
Q&A
If there is any question, Please speak English *slowly*…
Or just ask Franklin Weng (flee)