

# Open Source Software Options for Government

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## Aim

1. This document presents options for Open Source Software for use in Government.
2. It is presented in recognition that open source software is underused across Government and the wider public sector, despite the current and previous administrations intention to promote its use.
3. This set of options is primarily intended to be used by Government to encourage IT suppliers and integrators to fully evaluate open source options when designing solutions and services. The leading IT suppliers to Government will have had the opportunity to comment on this document before final publication.
4. Note that this publication does not imply preference for any vendor or product because open source software, by definition, is not tied inextricably to a commercial organisation. Any commercial entity can choose to support, maintain, or integrate open source software.
5. It is understood that the software market is a rapidly developing environment and any options list must be continuously maintained. However, given the lack of open source uptake, this options set is useful for encouraging IT suppliers to consider open source, and to aid the assurance of their proposals.

## Context

1. The Coalition Government believes Open Source Software can deliver significant short and long term cost savings across Government IT.
2. Typical benefits of Open Source include lower procurement prices, no license costs, interoperability, easier integration and customisation, compliance with open technology and data standards giving autonomy over your own information and freedom from vendor lock in.
3. OSS is not currently widely used in Government IT, and the leading systems integrators for Government Departments do not routinely consider open source software for IT solution options, as required by existing HMG ICT policy.
4. There are significant and wide ranging obstacles to Open Source in Government. Some of these are lack of procurement guidance, resistance from suppliers, concerns about license obligations and patent issues, and a lack of understanding of open source maturity and its development ecosystem.

## Open Source Software Options for Government – v0.1 DRAFT

### Feedback

Please provide feedback to:

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## 1. Server

Sector	Software	Consider as Alternative to	Comments	Real World Use
<b>Server Operating Systems</b>	<ul style="list-style-type: none"> <li>RedHat Enterprise Linux</li> <li>Canonical Ubuntu Server</li> <li>CentOs Linux</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Windows Server</li> <li>UNIX - Sun Solaris, IBM AIX, HP UX</li> </ul>	<ul style="list-style-type: none"> <li>General purpose Unix-like operating system with proven higher performance, availability and security record.</li> </ul>	<ul style="list-style-type: none"> <li>London Stock Exchange has moved to a Linux based infrastructure with</li> </ul>
	<ul style="list-style-type: none"> <li>FreeBSD, NetBSD, OpenBSD</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Windows Server</li> <li>UNIX - Sun Solaris, IBM AIX, HP UX</li> </ul>	<ul style="list-style-type: none"> <li>General purpose Unix-like operating system with proven higher performance, availability and security record.</li> <li>Particular record in internet and network services.</li> </ul>	<ul style="list-style-type: none"> <li>sss, telecoms, broadband, web servers</li> </ul>
<b>Virtualisation</b>	<ul style="list-style-type: none"> <li>Linux KVM</li> </ul>	<ul style="list-style-type: none"> <li>VMWare Server</li> </ul>	<ul style="list-style-type: none"> <li>sss</li> </ul>	<ul style="list-style-type: none"> <li>sss</li> </ul>
	<ul style="list-style-type: none"> <li>Virtualbox</li> </ul>	<ul style="list-style-type: none"> <li>VMWare Workstation, Parallels for desktop</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Remote Desktop Management</b>	<ul style="list-style-type: none"> <li>?? VNC?</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

## 2. Databases

Sector	Software	Consider as Alternative to	Comments	Real World Use
<b>Relational Databases</b>	<ul style="list-style-type: none"> <li>MySQL</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft SQL Server</li> <li>Oracle DB</li> <li>IBM DB2</li> </ul>	<ul style="list-style-type: none"> <li>General purpose, long established and proven.</li> <li>Component of established LAMP pattern stack.</li> <li>Optimised for read speed. Not as fully featured as PostgreSQL.</li> </ul>	<ul style="list-style-type: none"> <li>sss</li> </ul>
	<ul style="list-style-type: none"> <li>PostgreSQL</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft SQL Server</li> <li>Oracle DB</li> <li>IBM DB2</li> </ul>	<ul style="list-style-type: none"> <li>General purpose Unix-like operating system with proven higher performance, availability and security record.</li> <li>Particular record in internet and network services.</li> </ul>	<ul style="list-style-type: none"> <li>sss</li> </ul>
<b>Object Databases</b>	<ul style="list-style-type: none"> <li>Hbase / bigtable ???</li> </ul>	<ul style="list-style-type: none"> <li>???</li> </ul>	<ul style="list-style-type: none"> <li>sss</li> </ul>	<ul style="list-style-type: none"> <li>sss</li> </ul>

### 3. Middleware

Sector	Software	Consider as Alternative to	Comments	Real World Use
<b>Message Bus</b>	• Redhat MQ	• IBM MQ	• ??	• ??
	• Other one developed by bank	• BEA ???		
<b>Service Bus</b>	• sss	• sss	• sss	• sss

## 4. Application Servers

Sector	Software	Consider as Alternative to	Comments	Real World Use
Java Application Server	• Redhat JBoss	• IBM Websphere	• ss	• sss
	• Sun / Oracle Glassfish	• BEA Weblogic		
		• .net server?		
Other Application Server	• Plone	• sss	• sss	• sss
	• ???	• sss	•	•

## 5. Cloud

Sector	Software	Consider as Alternative to	Comments	Real World Use
Cloud Infrastructure	• Eucalyptus	• Amazon EC2	• ss	• ss
	• OpenStack	• Microsoft Azure	• sss	• NASA
Large Storage	• Htable	• Google BigTable • Amazon S3	•	•

## 6. Business Applications

Sector	Software	Consider as Alternative to	Comments	Real World Use
<b>Email Server</b>	<ul style="list-style-type: none"> <li>OpenXchange?</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Exchange Server</li> </ul>	<ul style="list-style-type: none"> <li>sss</li> </ul>	<ul style="list-style-type: none"> <li>sss</li> </ul>
<b>Virtualisation</b>	<ul style="list-style-type: none"> <li>Linux KVM</li> </ul>	<ul style="list-style-type: none"> <li>VMWare Server</li> </ul>	<ul style="list-style-type: none"> <li>sss</li> </ul>	<ul style="list-style-type: none"> <li>sss</li> </ul>
<b>Intranet Collaboration</b>	<ul style="list-style-type: none"> <li>Alfresco</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Sharepoint</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Document Management</b>	<ul style="list-style-type: none"> <li>Alfresco</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Sharepoint</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Records Management</b>	<ul style="list-style-type: none"> <li>Alfresco</li> </ul>	<ul style="list-style-type: none"> <li>Documentum, Meridio, TRIM</li> </ul>	<ul style="list-style-type: none"> <li>Certified</li> </ul>	<ul style="list-style-type: none"> <li>EU Council?</li> </ul>
<b>ERP</b>	<ul style="list-style-type: none"> <li>sss</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>CRM</b>	<ul style="list-style-type: none"> <li>SugarCRM</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>HR</b>	<ul style="list-style-type: none"> <li>???</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

## 7. Network

Sector	Software	Consider as Alternative to	Comments	Real World Use
<b>Network Monitoring</b>	<ul style="list-style-type: none"> <li>Nagios, other</li> </ul>	<ul style="list-style-type: none"> <li>Introscope?</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Mail Transport</b>	<ul style="list-style-type: none"> <li>Sendmail</li> <li>Qmail</li> </ul>	<ul style="list-style-type: none"> <li>??</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>DNS</b>	<ul style="list-style-type: none"> <li>BIND DNS</li> <li>Djbdns, others</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Authentication</b>	<ul style="list-style-type: none"> <li>Radius</li> <li>Kerberos</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Cert</b>	<ul style="list-style-type: none"> <li>CA-Cert</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

## 8. Web

Sector	Software	Consider as Alternative to	Comments	Real World Use
<b>Web Server</b>	<ul style="list-style-type: none"> <li>• Apache web server</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft IIS</li> </ul>	<ul style="list-style-type: none"> <li>• Apache is the web server behind the majority of internet websites, and has been dominant for 15 years.</li> </ul>	<ul style="list-style-type: none"> <li>• sss</li> </ul>
	<ul style="list-style-type: none"> <li>• Lighttpd, nginx, Cherokee</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft IIS</li> </ul>	<ul style="list-style-type: none"> <li>• High performance alternatives to Apache. Designed for performance and scalability, not for a wide range of functionality.</li> </ul>	<ul style="list-style-type: none"> <li>• Youtube?</li> </ul>
<b>Web Content Management</b>	<ul style="list-style-type: none"> <li>• Alfresco</li> </ul>	<ul style="list-style-type: none"> <li>• Morello, others?</li> </ul>	<ul style="list-style-type: none"> <li>• Software development is loosely managed, with change control but no coherent direction or quality criteria.</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Software development is undisciplined, not following any process or governance.</li> <li>• Software development is not open to public contribution.</li> </ul>
	<ul style="list-style-type: none"> <li>• Drupal, Joomla, Wordpress, others</li> </ul>	<ul style="list-style-type: none"> <li>• Morello</li> </ul>	<ul style="list-style-type: none"> <li>• ss</li> </ul>	<ul style="list-style-type: none"> <li>• whitehouse.gov website?</li> </ul>
<b>Internet Collaboration</b>	<ul style="list-style-type: none"> <li>• ???</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Plone?</li> </ul>			

## 9. Desktop Office

Sector	Software	Consider as Alternative to	Comments	Real World Use
<b>Desktop Office Applications</b>	<ul style="list-style-type: none"> <li>• Libre Office / OpenOffice</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Office</li> </ul>	<ul style="list-style-type: none"> <li>• LibreOffice is community developed. OpenOffice is governed by Oracle.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Google Apps? Are they open source?</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Media Player for Audio &amp; Videos</b>	<ul style="list-style-type: none"> <li>• VLC</li> </ul>	<ul style="list-style-type: none"> <li>• Quicktime</li> </ul>	<ul style="list-style-type: none"> <li>• Video lan</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Project Management</b>	<ul style="list-style-type: none"> <li>• ???</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Project</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

## 10. Specialist Applications

Sector	Software	Consider as Alternative to	Comments	Real World Use
<b>Statistics &amp; Data Analysis</b>	<ul style="list-style-type: none"> <li>• GNU R</li> </ul>	<ul style="list-style-type: none"> <li>• S/S-plus, SAS</li> </ul>	<ul style="list-style-type: none"> <li>• GNU R is the leading and mature statistics and numerical computing system. It is now the established lead in academia and increasingly in industry, displacing commercial products.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Media Transcoding</b>	<ul style="list-style-type: none"> <li>• Avidemux</li> </ul>	<ul style="list-style-type: none"> <li>• Adobe Aftereffects? Apple?</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Web Development IDE</b>	<ul style="list-style-type: none"> <li>• Bluefish, ???</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Programmimg IDE</b>	<ul style="list-style-type: none"> <li>• NetBeans</li> <li>• Eclipse</li> <li>• KDeveleop</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Visual Studio</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Image &amp; Photo Manipulation</b>	<ul style="list-style-type: none"> <li>• GIMP</li> <li>• Krita</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

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<b>Desktop Publishing</b>	<ul style="list-style-type: none"><li>• Scribus</li></ul>	<ul style="list-style-type: none"><li>•</li></ul>	<ul style="list-style-type: none"><li>•</li></ul>	<ul style="list-style-type: none"><li>•</li></ul>
<b>Drawing &amp; Diagrams</b>	<ul style="list-style-type: none"><li>• Inkscape</li></ul>	<ul style="list-style-type: none"><li>•</li></ul>	<ul style="list-style-type: none"><li>•</li></ul>	<ul style="list-style-type: none"><li>•</li></ul>
<b>Diagramming</b>	<ul style="list-style-type: none"><li>• Dia</li></ul>	<ul style="list-style-type: none"><li>• Visio</li></ul>	<ul style="list-style-type: none"><li>•</li></ul>	<ul style="list-style-type: none"><li>•</li></ul>