



**SELECTING NETWORKING
MANAGEMENT SOFTWARE:**

FREE TOOLS VS COMMERCIAL SOLUTIONS

A VENDOR-INDEPENDENT VIEW



WHITE PAPER

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SUMMARY

IT departments answer business challenges by researching, designing and building technical solutions. More often than not these solutions are centred on software. Early on in this cycle, the question is typically asked: “could we use a free tool?”

Depending on the environment within the company and the experience of key stakeholders, this option will either be quickly embraced or dismissed.

Network Management is no different in this respect. With so many well-known and respected Open-Source Software (OSS) options with free licensing models, they will often appear to be the most attractive solution. In many situations, OSS may be the best strategy, but not always.

This paper aims to provide researchers with many viewpoints on this discussion, from industry and from IT professionals with have experience of using and installing free software.

OSS VS COMMERCIAL: GENERIC

**BEFORE EXPLORING THE NETWORK
MANAGEMENT SPECIFIC CONSIDERATIONS,
WE HAVE EXTRACTED SOME KEY OPINIONS
AND RESEARCH ALREADY COMPLETED ON THE
GENERAL USE OF OSS WITHIN BUSINESS.**

Security

A recent study of 2,944 software projects with open source components found that 23% had security vulnerabilities. Meanwhile, only 1.3% of the open-source libraries with vulnerabilities were updated with the latest version. 93% of these vulnerabilities had either high or mid-range severity. alerts only on the failure of one device that is impacting many. Or, for another product this might only be achievable via pre-configuring a series of manual rules.

Industry research

Industry research and advisory firm Gartner, completed a survey and put governance issues at the top of the list for barriers to OSS adoption.

“Just because something is free doesn’t mean that it has no cost,” said Gartner research director Laurie Wurster in a statement. *“Companies must have a policy for procuring OSS, deciding which applications will be supported by OSS, and identifying the intellectual property risk or supportability risk associated with using OSS. Once a policy is in place, then there must be a governance process to enforce it.”* Wurster added that the variety of license types and forms for open-source software could make understanding when and where OSS might fit in a “frustrating process.”



OPERATIONAL CONSIDERATIONS

KedronUK researchers have found these operational factors to be key in deciding the success or failure of OSS Network Monitoring Projects.

SIZE OF IT DEPARTMENT

In order to successfully deploy the OSS platform the IT team needs to have the skills and knowledge not only of your business functions, but also an in depth knowledge of the source code of the application, along with any other business systems that require integration.

These skills have to be available in house, as the company is solely responsible for the operation of the open-source application. It is also vital that the knowledge is documented, transferred and kept up to date.

All of this can be time consuming and an IT department needs to have the spare resource capacity and skill set to assign to the project. This level of resource needs to be maintained beyond setup of the solution.

SCRIPTING CAPABILITY

Our research shows that in order for OSS to deliver the kind of functionality required by modern IT departments, a high level of scripting and customisation needs to be completed.

This is often required to extract data for reports and collect data from non-supported targets. Users will find this is required much less within commercial tools, where user-interface, ease of use and up-to-date device support is a much higher priority.

The ability and cost of the time to achieve this should be factored into a decision between selecting OSS and commercial offerings.

SUPPORT & ACCOUNTABILITY

OSS solutions usually operate within a development community, which means that the software developer does not have direct accountability for the end user's specific project. This means that there is not an assigned contact or department responsible to the user to resolve issues, and there are no guarantees any issues will be resolved.

Commercial software is usually sold with a contractual support and maintenance agreement, with set response time and set service level agreements. A strong, highly skilled group working in partnership with its customers, understanding their requirements and always available, negates the risks of cover for holiday and sickness absences.

To clarify, this doesn't mean that users of OSS will not receive support or that issues won't be addressed. However it does often mean that there are not agreements in place to ensure this be addressed, but it may mean this does not happen in line with your business requirements.

FINANCIAL CONSIDERATIONS

CAPITAL EXPENDITURE

Commercial software can sometimes have a high initial purchase price, depending on the solution selected (outside the scope of this document).

Open-Source as the name suggests, is open with source code availability, along with the freedom to change and customise with unlimited usage. Although the term doesn't necessarily mean "free", in practice all the key players provide licenses to users at no cost.

But capital expenditure is only one of the points that needs considering.

OPERATIONAL EXPENDITURE

Many of the companies that KedronUK have consulted with have spent years working with OSS Tools, and in many cases have personnel (and in a couple of cases, teams) dedicated to managing these systems. Tasks include; writing custom scripts to obtain measurement values, managing databases, building custom reports and troubleshooting issues without a dedicated support line.

SUPPLEMENTING MISSING FUNCTIONALITY

As OSS tools often do not offer the far-reaching features of commercial tools, frequently commercial tools are bought in addition. This obviously affects the capital expenditure benefits but also forces the hand of the IT departments not to select tools based on merit, but according to the missing functionality within their Open-Source estate. This can result in high operational overhead and unaligned systems.

CLIENT PERSPECTIVES

“We found that no one free tool could deliver everything we needed so we had a combination of Nagios, Cacti and several in house developed solutions working together. This worked well for us for a long time, however as the network changed, we found it hard to keep the monitoring solutions up to date and also because integration was difficult between tools it was time consuming to generate the reports the management team needed to report on end to end services”

Major Gaming Company, UK

“Free tools work well for us, we have a relatively small network which is not directly related to the business bottom line in many cases. The manufacturing network is another situation but this is outsourced to a third party. Based on this we couldn't justify the expenditure on commercial tools”

Manufacturing Company, UK

“ We would never go back to free tools, after experiencing the damage that can be done after losing key members of staff that are the owners of critical knowledge about how the system is set up. In practice this knowledge should be shared amongst team members but in reality the department is often too busy to truly achieve this. With our commercial product our supplier is also an expert on how our system is set up and is able to train new members of staff on our behalf”

ISP, UK

“We used free tools for many years and enjoyed the flexibility they provided. However, after a consultancy analysed the cost spent on developing these tools, we realised it was more cost effective and less risky to adopt a commercial product, this has allowed man hours to be redistributed to other projects improving our productivity”

Major Insurance Company, UK

QUICK REFERENCE COMPARISON TABLE

COMMERCIAL SOFTWARE		OSS SOLUTIONS
<p>Initial cost incurred Usually a single payment which includes support and maintenance for a period of time.</p>	CAPITAL EXPENDITURE	<p>No initial cost No specific cost initially, however you are likely to incur developer costs throughout the project lifecycle.</p>
<p>Transparent Usually includes support contract and yearly maintenance / free upgrades when published & staff training.</p>	TOTAL COST OF OWNERSHIP	<p>Difficult to price Utilisation of in house / contract developers, and web forums, no support contracts included</p>
<p>Always available Contracts available in line with business requirement SLAs, providing guaranteed response and resolution time frames and a structured support framework.</p>	SUPPORT	<p>Available with no guarantee No guaranteed response time, and no guarantee of a response at all, no defined framework for response or resolution time frames.</p>
<p>Guaranteed Defined and sometimes customised in your support framework from the vendor.</p>	RESPONSE TIMES	<p>Best endeavours No support contracts available as no specific solution provider is responsible.</p>
<p>Usually available Tends to be carried out by the software vendor, can be done in house with support of the vendor.</p>	INTEGRATION	<p>Usually available Usually carried out by your in house developers. With web forum support if available.</p>
<p>Available from Vendor This is always an option which is available from most vendors.</p>	STAFF TRAINING	<p>No Availability There is no availability from a specific organisation. Training would usually be provided by expert developers familiar with the application either in house or contractors.</p>
<p>In Place Most vendors will continually develop their products and if you are under maintenance agreement you will be eligible for free upgrades, and the upgrade are normally tested.</p>	CONTINUAL DEVELOPMENT	<p>Your Responsibility You are solely responsible to develop and maintain and test your OSS application.</p>



CONCLUSION

IT DEPARTMENTS SHOULD NOT SIMPLY FOCUS ON WHETHER THEY SHOULD SELECT OSS OR COMMERCIAL SOFTWARE. INSTEAD THEY SHOULD ASK, “WHAT PROBLEM DO I HAVE AND WHAT SOLUTIONS ARE AVAILABLE TO RESOLVE IT IN THE MOST EFFICIENT WAY? “

They need to establish what level of support they will need over the long term and whether that support is readily available. Full consideration needs to be given to the risks of not having a contractual support agreement.

Experience says that free doesn't always mean free, and substantial costs can be involved. Yet on the other hand, spending large sums of money on software won't necessarily resolve your problems if you select the wrong tool for the job.

Decision makers should consider their unique functional requirements and whether OSS can truly provide what the organisation needs. [\(For a list of commonly required functionality, please see our *Selecting a Network Management System: A Researcher's Guide and RFI Checklist White Paper*\)](#)

Managers need to evaluate their ability to take on operational overhead and consider the impact of system faults on the business bottom line. They also need to review the risks associated with not having a commercial relationship with the software vendor with supporting SLA's.

KEDRONUK

Enterprise Management Solutions

KedronUK is a leading Network and Application Performance Management Consultancy. We provide our customers with increased visibility and control across their network and application infrastructure by combining leading technology, knowledge and service.

KedronUK appreciate that although our clients have similar challenges and objectives, the obstacles they face can differ vastly from company to company and culture to culture.

We approach each client engagement as an individual project, creating unique plans for each customer, from initial discovery and scoping right through to installation, configuration, deployment and solution development.

Our services provide greater operational and security intelligence, increased productivity by reducing problem resolution times, and cost saving via automation and optimisation of IT infrastructure.

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