
Mid-market management software

Helping smaller organisations make the right choices

By Jon Collins, Tony Lock and Dale Vile, November 2009

Introduction

IT management tools are finally, after many decades of masquerade, ready to deliver the functionality that their product descriptions infer, namely capabilities to actively manage the services provided by the IT infrastructure rather than simply monitor if systems are up and “running”. This is placing the onus on organisations to consider how they can best move their systems management thinking forward, and bring the management tools and processes along too. The pressure is on IT to deliver more flexible services to its customers whilst the workloads now placed on IT administrators are almost overwhelming. Doing nothing on automation in the IT management arena is no longer an option.

This paper considers choices for management software for mid-market organisations. Of specific interest are help desk and application (event and performance) management software: such technologies are now advanced enough to deal with many routine, repetitive tasks that consume scarce IT personnel resources. However, many seasoned IT professionals may not entirely trust IT management tools to deliver reliable automation for routine tasks.

It is not just a case of what to implement, but how – for example, should tooling be acquired as standalone packages, as an appliance or as a managed service? Aimed at IT managers and senior operations staff, this paper is intended to ensure the necessary level of due diligence for what may be an expensive acquisition for a smaller company.

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Areas of IT Management

It is a common challenge for the complexity associated with managing the IT infrastructure to cause key operational activities to be either deliberately omitted or to reach a point where important IT systems drop off the routine management radar screen thereby putting pressure on service levels.

To counter such risks, a number of operational best practices have evolved over the years, which are supported by varying levels of automation in the form of management tools. The table below highlights several IT management activities and the benefits that can be accrued through the effective use of such tools.

Capability	Description	Benefits
Service/Help desk	Fault / incident reporting, change requests, customer interface	Incident and problem management Change Management Service Level Management Service enhancement IT Business communication channel
Asset management	Complete view of the IT Assets, their location, and usage. Who is using what equipment? What services are deployed and to whom? What spare capacity is there in the IT infrastructure?	Planning Cost management Compliance / Governance Inventory tracking, maintenance contract management, software licence management, IT financial control
System monitoring	Event monitoring, status monitoring, capacity / threshold monitoring	Service quality delivery / assurance fault location Capacity monitoring and management
Application management	Application availability, response time monitoring	Service quality, audit control, root cause analysis, Business enhancement
Configuration management	IT equipment configuration	Service quality assurance, audit control, security
Identity Management	IT identity provisioning and de-provisioning	Security / Risk mitigation, Compliance / Governance

Whilst IT management tools can support the better delivery of IT services, some solutions can be complex, time consuming and expensive to get running. These issues, often coupled with non-trivial operational needs, can temper the suitability of some IT management offerings for mid-market deployment. Until quite recently there has been something of a gap between the simpler management tooling suitable for use in smaller companies and the sophisticated high-end enterprise management suites typically deployed by the largest organisations with a wide range of complex systems in their IT infrastructures.

Over the past few years a number of approaches have emerged to fill this gap. In this paper we document several such approaches and describe their benefits, limitations and selection criteria. Before an organisation embarks on such a decision however, it is worth considering the constraints and contextual factors that might influence such a decision.

Understanding your needs

So, what kinds of factors need to be taken into account? Some of these will no doubt be driving the decision to investigate the adoption of some kind of management software capability. A checklist of factors to be addressed should include:

- Resource constraints in terms of technical skill sets, resource availability and time factors.
- Budget models and cost constraints, for example the ability to look at subscription-based models versus capital expenditure, licensing etc.

- How much flexibility is required from the management tools platform, versus how locked down it needs to be?
- What physical constraints exist for IT equipment, for example in terms of space, power and cooling?
- What is the preferred operating model in terms of using in-house resources, subcontractors or service partners?
- How is the organisation looking to evolve, for example in terms of application use, remote working, and other areas which may have an impact on the kind of management solution to be implemented?
- Are there any business / IT projects underway that necessitate modification of the IT management / administration solutions?
- What is already in place from a tooling perspective, what works and what needs to be improved?

This last point is important as the chances are the organisation is highly likely to already have some tools in place. It is important therefore to fit in with what is already there (or look to migrate), as well as ensuring that any new solution is compatible with existing skills, processes and operations / IT administration culture. When considering which IT management tasks to automate, the answer will vary organisation by organisation depending on needs, skills, processes and existing tooling.

Addressing needs

While there is a myriad of options, the sections below consider a subset of several of the more commonly available approaches, together with their strengths and weaknesses taking into consideration the constraints discussed in the previous section.

Point Products

Advantages associated with systems management point products are centred on the fact that tools deliver a focused set of capabilities to directly address specific challenges. This avoids acquiring (and being charged for) non-relevant capabilities, as may be the case for a suite. Point tools can be expected to be faster to implement and require staff to be trained in key functionality only.

The disadvantages of such an approach become apparent when the organisation requires multiple areas of management tooling. Utilising multiple point tools could result in a noticeable increase in acquisition and implementation expenses, as well as requiring a degree of integration between the point tools in order to minimise daily administrative overheads: this may in turn require considerable ongoing expense as systems are updated over time. Administration staff may also need to be trained in multiple tools, once again at the cost of time and expense.

For these reasons, point product tools are usually best fitted to scenarios where functional needs are very well defined in a narrow area of IT management and are unlikely to change dramatically over time.

Mid-market solution suites

It may appear self evident, but the primary advantage of mid-market systems management suites is that they have been, at least in theory, designed to meet the requirements of the mid-market. The benefit is therefore a lack of redundancy and bloat, particularly with respect to 'express' versions of enterprise frameworks, described below.

However, as we all know, there really is no such thing as "a typical mid-market customer" thus it is difficult to ensure that full functionality is delivered to meet any organisations requirements without potentially over-extending by delivering too many unused features for any particular customer. The alternative is that things are scoped too tightly, meaning a number of add-ons need to be purchased adding to the up-front and operational costs.

As a consequence mid-market solutions may not be entirely suitable to all organisations.

Systems management appliances

An area which is currently seeing a growing amount of interest is around appliances which have system management software pre-installed and (as much as possible) pre-configured. The key advantages of such appliances are centred on "simplicity". As such tools are delivered as a hardware or software / virtual appliance they are, by their very nature, relatively straightforward to install and make operational. This in turn often supplies additional potential benefits through getting the systems management solution deployed rapidly.

Beyond the speed of implementation, an oft-mentioned advantage involves reducing the overhead associated with updating and maintaining the solution. In addition users need just be trained in the use of a single tool, thereby saving time and training costs. Some appliances do point out that they try to deliver "ease of use" and consistent interfaces to simplify usage.

Of course, such simplicity and reduced overhead comes at a cost, in that the range of functionality tends to be more tightly scoped than with non-appliance solutions. While this may not be a problem for organisations that know what they need at the outset, it can be an issue for organisations where business requirements on new IT services are highly fluid. This can challenge the management tools if they are unable to cover either the platforms involved or lack in necessary functionality required to fully support a new business service.

As a consequence such appliances are better suited to situations where the IT management requirements are well understood and unlikely to change dramatically in medium term.

Express versions of enterprise frameworks

Enterprise frameworks clearly have the potential to cover almost all elements of infrastructure management required by a mid-market organisation. The promise of express versions of these tools is that they deliver enterprise class functionality in an easier to implement and consume package. In theory such tools should be simpler to get in and working than their full grown enterprise cousins and require less maintenance effort to keep them functional. Such offerings encompass most requirements and usually offer flexible upgrading to their enterprise counterparts should the need arise as the organisation grows.

The disadvantage that such tools may hold is the very scope of functionality they make available to a mid-market customer. Some suites may contain functionality that the customer does not require, potentially significant in scope, and this may cause some purchasers to wonder if they are paying for functionality for which they have little use. Some of these tool sets may also require more training or access to specialist skills in order to install and exploit their capabilities than dedicated mid-market or appliance offerings. It should be recognised that some Express offerings may have limited capabilities compared to the original Enterprise version of the software whilst there may also be a limitation on the number of IT devices which can be managed.

Such an approach may be attractive to large mid-market customers with a complex IT infrastructure supporting a wide variety of services or those who may be growing rapidly or expanding via mergers and acquisitions.

Managed service offerings

Managed service offerings can be either installed internally or hosted by a third party, who will then deploy and operate the management software, as well as support the infrastructure 'under management'. The main advantage is that they enable an organisation to implement and benefit from capabilities that they are unable to deploy and operate using internal resources. This approach can also limit concerns about how to maintain the implemented tools as they develop. By utilising outside skills to manage elements of the IT infrastructure the organisation can use technologies that would otherwise be outside their ability to exploit. As has been mentioned in the section on systems management appliances, some managed service offerings now make use of appliances as the technology base through which the managed service is delivered to the customer's premises.

The major concerns associated with managed service offerings come down to ensuring that the service contract and customer-supplier relationship deliver the services that the organisation requires. Given that these requirements are likely to change over time it is essential that clear procedures be in place to cater for service alterations in a timely and cost-effective fashion. It is

important to recognise that employing a managed service does not remove all responsibility for the operation of said service from the business. Managed service relationships require regular attention and communications, if not daily watering and feeding.

Once again such solutions are best fitted to situations where the IT management features required are well understood and unlikely to change dramatically in medium term. It is of fundamental importance that the parties enjoy a degree of mutual trust and flexibility.

A summary of advantages and disadvantages is given in the table below.

Approach	Advantages	Disadvantages
Point Products, operated as best-of-breed (including open source)	Focus on single area Best tool for a single job Lack of redundant functionality Pay for what you need	Cumbersome to integrate with other Systems Management tools Limited functionality Multiple skill sets required Multiple admin consoles Maintenance of integration can be expensive
Mid-market solution suites	Designed for mid-market Extensive functionality	Functionality may exceed requirements Extensive Training
Systems Management Appliances / software appliances	Simple to implement Fast to deliver capabilities Little need for complex tool integration Simple ongoing maintenance	May lack flexibility Not as much functionality as enterprise solutions
"Express" versions of enterprise frameworks	Extensive capabilities	Can be expensive to acquire May have estate size limitations May require specialist installation services Extensive training required to exploit full capabilities
Managed service offerings	No need for extensive product skill training Budget can be classified as Operational expense not Capex	May not be flexible without contract renegotiation

The reality is that there is no single answer that is suitable for everybody. Instead organisations will need to evaluate their own requirements in order to assess which approach is the most appropriate for any particular IT management area. Indeed it should be borne in mind that any organisation may choose to select different approaches for different areas of their IT management solutions.

Where should you start?

Clearly there is no "one size fits all" when it comes to management tools and how they are delivered. There are many systems management solutions being offered from a wide gamut of vendors. Each will have different characteristics, foibles and capabilities. The challenge, of course, is to identify which could help.

There are several obvious but vital steps that must be undertaken in order to maximise success whilst minimising both pain endured and the time taken to garner benefits. These include:

- Analyse and plan thoroughly – it is absolutely essential that the business and IT goals, both short term and longer range, are established up front. It may be for example that certain systems and services seen by IT as essential, may be seen as lower priority from a business perspective.
- Get senior management buy-in to both the business and technology reasons for the implementation of management tools. Ultimately the business is the paymaster and the customer for any improved services that result – and may need to be convinced to stump up the money.
- When defining a solution, consider the benefits and costs of a number of solutions from 'do nothing' to 'if money was no option'. Everything in between will be a compromise, so be sure that an option can be selected that incorporates the minimum necessary capabilities.
- Establish that the selected technology works and can scale from demo to the real thing. Some management tools can appear great in principle, but there may be some quite

specific reasons why they will not work for you. In a nutshell – run a pilot if possible, or at the very least speak to a reference customer.

- Understand the business process impacts of the implementation of management tools – if there is a service change for example, how will service users be directed? Also, consider the operational impacts on IT staff and whether there will be any requirements for training.
- Scope the project tightly – do enough, but don't try to boil the ocean. With this in mind, establish success metrics and measurements at appropriate levels – set achievable short term goals as well as long term strategy.
- Effectively manage risk, by avoiding any unclear business focus and ensuring that there is solid organisational commitment. In addition it is essential to attempt to manage expectations to realistically achievable goals.

As we have seen from our research, experienced practitioners understand that all systems management projects are exercises in people and process management just as much as technology challenges. There is plenty to be done before even inviting software and service suppliers to come in, and the better prepared you are, the better the resulting deployment can be.

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