



SMART GUIDE

Essential considerations for cloud migration planning and cost optimization

Asset Intelligence provides a smarter transition pathway and management platform based on accurate, highly granular data.

Introduction

Many organizations are rushing to move their estates to the cloud, expecting major cost savings and other benefits. However, this is a move that requires careful preparation, especially in terms of deep-dive analysis of your existing IT estate and the way you use the assets. If you don't invest enough time in preparation and planning, you will struggle to realize the full benefits. At present, surveys suggest that the results are often disappointing in terms of cost, with inevitable implications for return on investment.

For example, a North American study¹ by Softchoice found that...



57% of IT leaders have exceeded their cloud budgets at some point – a third of them by more than 20%.

Common causes of problems include inadequate understanding of the current operating environment, particularly infrastructure configuration and the application portfolio; failure to adequately analyze usage patterns for hardware, software and services; and difficulty in selecting the most appropriate configuration from potentially millions of possibilities available from cloud providers. Given the on-demand nature of cloud, any of these issues can mean that you end up paying for more resources than you need, without necessarily getting the service level that you want.

Scalable's Asset Intelligence platform, Asset Vision, gives you the accurate, comprehensive and granular information you need to avoid these pitfalls. Powerful out-of-the-box normalization capabilities make short work of enriching data on discovered assets and obtaining a detailed understanding of their usage.

Unusually, Asset Vision gives you a "single pane of glass" – one window through which you can view and understand your entire estate. You get the same intelligence about all your hardware and all your software – including on-premise, SaaS, cloud and mobile applications – and can easily compare costs and performance at each stage of the cloud journey. This means you can actively manage your cloud installation after migration to ensure that the projected value continues to be realized. You'll always be able to show that your users are getting the right services with the right performance at the right price.

All this makes Asset Vision an invaluable tool to support your move to cloud. Its intelligence enables you to work out exactly what cloud resources you'll need, comparing costs at various levels of provisioning. That way, you can not only make the right provisioning decisions, but also confidently forecast what the total cost of ownership will be and what return on investment you can expect. Then, once you are up and running in the cloud, Asset Vision aids both day-to-day management and value delivery: The single pane of glass means you can make direct comparisons of past, present and future scenarios, regardless of the fact that applications may be moving between on-premise and cloud infrastructure.

¹ <https://m.softchoice.com/web/newsite/documents/research/State-of-Cloud-Readiness-Fall-2018.pdf>

Asset Vision can also prevent “cloud sprawl”, the latest manifestation of shadow IT, where business units purchase their own cloud apps and services in an uncontrolled manner and without the knowledge of the IT function – which inevitably leads to “cloud shock” for the CFO when the bills come in.

Whatever tools you choose, we suggest you guide your journey to the cloud by working through the six questions below. Questions 1 to 5 can be answered one at a time, but cost management should be revisited at every step.

Cost Management

- ① What have I got?
- ② What should I move?
- ③ Who can give me what I need?
- ④ How do I move?
- ⑤ How can I keep delivering value?
- ⑥ How can I avoid cloud sprawl and cloud shock?

Six questions to guide your cloud journey

With preparation, you can enjoy a smooth move to the cloud and, equally importantly, continue to deliver full value months and years after the initial move.

In this guide, we provide pointers for actions you can take at each stage to ensure success during and after your migration, before outlining how Scalable can help.



1 What have I got?

As with any major change, the first step in cloud migration is to build a thorough understanding of your starting point.

This means **gathering accurate and comprehensive information about your current IT assets and how they are used**. For this you need an Asset Intelligence platform that provides you with granular, deep-dive usage metrics and profiles, right down to the level of individual keystrokes and clicks.

The platform should enable you to easily discover assets wherever they are – including not just conventional on-premise assets but also SaaS, cloud, mobile.

You should be able to do all this with a single analysis tool, so that you get a unified view of your estate, both before and after the move to the cloud, presented on a single dashboard. This is what we at Scalable refer to as the “digital fingerprint”.

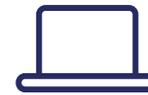
Without undue effort on your part, your tool should give you five essential data points that will provide a complete picture of usage, enabling intelligent analysis of your IT assets:



Who used?
Jo Smith



What software?
MS Word



From where?
on their laptop



For how long?
32 minutes



How intensively?
557 keystrokes



Beware of traditional asset management tools that only give you crude data such as whether an individual has started a particular application or not. These do not allow you to realize the full value of your existing estate, let alone plan a move to the cloud. For this, you need to know much more about whether and how the individual is using the application, when and how often. Only with this insight can you size your requirements accurately and decide how best to meet each one – both vital if you are going to optimize your costs and performance in the cloud world.

1 What have I got?

Your Asset Intelligence platform should come with **strong normalization capabilities**, it should be able to provide you with the names of licensable products associated with each user, device or location, rather than a list of low-level components that needs a lot more processing to yield any insight. A platform should be able to recognize most applications out of the box, and allow you to identify your own applications to be monitored as well. You should get information about release and end-of-life dates, licenses and locations, in addition to meaningful asset names.

As well as telling you what hardware and software is in use where, your platform should also give you enough usage information to **determine when someone is allocated more (or more expensive) resources** than they really need. For example, with Office 365 it may be that some people are using full-blown Office applications on a PC when all they really need is the browser-based versions.

You will also need to **collect performance data**, gathering metrics about your utilization of each element of your infrastructure including CPUs, memory and network bandwidth. Make sure you understand how performance varies over time and how peaks and troughs in usage affect it. Collecting this data will help you plan what services and resources you will need from your cloud vendor. It also provides a baseline for post-migration performance validation. Your organization probably has the necessary tools in place already because of the need to collect performance data for use in your day-to-day operations.

The analysis described above doesn't require as much effort as you might think, provided you have the right Asset Intelligence platform. The analysis will pay dividends, since you will be in a position to understand your current hardware and software consumption and what it currently costs you with a high level of granularity. These insights will provide a firm foundation for your move to the cloud.

How trustworthy is your data?

The accuracy of the picture you can get of the current estate depends entirely on the quality of your data. The best source is a reliable Asset Intelligence platform that collects data on an ongoing basis. This platform must both normalize a high proportion of data using its own out-of-the-box capabilities and be easily customizable to handle your own unique applications, including those that are customized versions of off-the-shelf products.

Data about both on-premise and cloud applications should be handled in a consistent and integrated way, so that your platform can go on collecting trustworthy data to help you manage your estate effectively during and after migration.



2 What should I move?

Once you have answered the previous “What have I got?” question, you should have an accurate picture of the as-is estate, and of how it is used and performs. Don’t assume however that you need to reproduce this picture when you migrate to cloud. Instead, **look for opportunities to rationalize and modernize** the estate, taking advantage of what cloud has to offer.

Ask yourself if you can:

Reduce costs by replacing conventional applications with SaaS solutions, and workstations with Chromebooks or a “bring your own device” (BYOD) arrangement.

Before making decisions like these, it is important to **understand the cost** of rationalization (in terms of training or extra licenses, for example) and to quantify any impact on user productivity.

Remember that there may be **constraints on what can be moved to the cloud**. For regulatory or organizational reasons, there may be sensitive systems that the management feels must remain on-premise. It is important to talk to key stakeholders to get this information, then adjust your statement of requirements to reflect this.

Some older applications may not be suitable for migration to the cloud, for example because they do not scale well. Performance considerations may also dictate keeping certain applications or services on-premise.

You’ll also need to consider whether keeping some applications on-premise while migrating others to the cloud requires development of **new interfaces or other integration measures**, and if so work out who is going to do this work – whether an in-house team, application vendor, or systems integrator.

Retire applications if they are no longer used or if a better and/or cheaper alternative is already in use elsewhere in the organization.



3 Who can give me what I need?

You now have an accurate picture of the as-is estate and have amended it to exploit any opportunities for rationalization and pinpoint any applications that need to remain on-premise. With a clear statement of your requirements, you're now in a position **to start approaching and evaluating cloud vendors** to see which one can best satisfy your needs.

First, though, it's important to be clear about some basic differences between providers. Some will match your usage profile better than others, which may point you in one direction rather than another. The three main vendors, Amazon Web Services, Google Cloud, and Microsoft Azure differ in particulars such as:

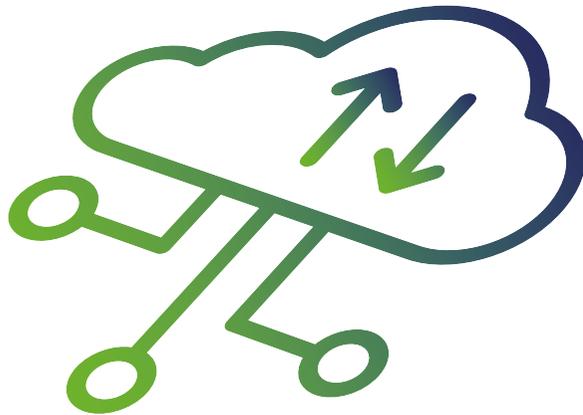
- Ease of use
- Geographical presence
- Pricing basis (on-demand pricing is by the hour or by the minute – but there are also variations where you commit to certain levels of usage in return for a lower fee)
- Market share
- Tools available for management and monitoring
- Ease of integration with standard office software

As well as talking to the vendors that seem best suited to your needs, it's advisable to **experiment with each vendor's offering** to test whether it will in reality provide what you expect. Try different configurations on each cloud platform and compare the performance you get on each one with your as-is metrics to ensure you are getting the performance you need at the right price.



4 How do I move?

Having defined what you will move to the cloud and which platform and configuration you will use, you are in a position to start planning your move.



> Get the sequence right

Begin by modeling the dependencies between elements in your current environment including all the applications and services. Your Asset Intelligence platform should help you to see which servers are talking, which should help you identify flows of information. Understanding those connections will help you work out what the order of migration should be, and whether certain applications need to be migrated together. Failure to notice dependencies and group elements accordingly is one of the most important causes of problems during cloud migration. It also makes the problems very difficult to fix.

> Get the right versions of everything

Use normalized data from your Asset Intelligence platform to make sure your plan caters for every single application that is running, and that users will end up with the right version of applications (complete with any essential customizations). Ensure that the cloud versions of all relevant packages are correctly licensed.

> Don't overlook anything

Make sure that where appropriate your plan includes any SaaS services, such as Salesforce, that are currently being used. Even if they constitute "shadow IT" rather than part of your official IT strategy, the organization may grind to a halt without them. Your Asset Intelligence platform should identify these for you. Once again, ensure the necessary licenses or registrations are in place.

> Check everything's working

Carry out, and publicize, carefully selected pilot migrations until you and your stakeholders are confident that your plan will work, before attempting to migrate the live system. Use the pilots to verify that your cloud environment matches your requirements, comparing it with the starting position using performance measurement tools and an asset intelligence platform (assuming you've chosen one that works equally in the cloud and on-premise). This will avoid visible setbacks that affect the business and undermine the organization's confidence in the project.

5 How can I keep delivering value?

Working through the previous questions carefully should ensure a smooth migration. Once you're successfully running in the cloud, it's important to keep verifying that value is being delivered, which is mainly a question of repeating stages 1 and 2 in our sequence to check that you have what you need but no more.

Harness your performance tools and Asset Intelligence platform to **verify that you have the right level of resources for your evolving needs**. Ensure that users have the devices and services that they need, and remove or redeploy anything that is no longer required. Equally, check that you are not paying for more cloud resources than you really need – for example, is an application starting instances that are rarely used? The aim should be to match the performance baseline you captured from your on-premise solution and then gradually improve on it, while containing and, preferably, reducing costs.

Review your portfolio to **make sure you have only the necessary applications and services**. More opportunities for rationalization may come up in the future, for example as more SaaS alternatives to conventional apps become available.

Keep an eye on alternative cloud vendors and configurations to **ensure that your chosen cloud solution is still the best and most cost-effective** for your needs. If not, be assured that once you have migrated to the cloud, changing vendors is generally an easier process than the initial migration.



6 How can I avoid cloud sprawl and cloud shock

Cloud migration is not a one-time project; there remain significant challenges after the move has been made. A major concern is “cloud sprawl”, where business units buy and implement apps or services without the involvement of the IT function, or even its knowledge. This of course is none other than the traditional shadow IT challenge, but it can potentially escalate much faster than a traditional environment because of the on-demand nature of cloud (which of course is a major reason for businesses to use it).

Unauthorized subscriptions to cloud apps and services incur significant costs, especially as they often remain in place after they are no longer needed, so that the costs continue to mount up. This cumulative growth can lead to “cloud shock” on the part of the CFO when invoices come in. Not only that, but unauthorized cloud use brings security risks that could lead to reputational damage, regulatory fines, remediation costs, and other repercussions, both tangible and intangible.

For the business to avoid cloud sprawl and cloud shock, IT needs to **stay on top of overall cloud usage**. This is best done through the use of automated tools that enable IT to **view all cloud usage, including that initiated by business units without IT’s involvement**. IT, business and finance then all need to collaborate to **ensure that total spend is kept**

under control, and that money is only spent where there is a clear business benefit. Apps and services that are no longer used must be shut down in a timely manner. All this must be done without unduly constraining the business’s agility, which is perfectly possible provided new apps and services are adopted in a visible and controlled manner.

Once there is a clear view of which cloud applications and services are being used by whom and for what purpose, it becomes possible to decide which to block and which to allow, and to identify any conditions and restrictions that should govern their use.



Asset Vision can support you during cloud migration and beyond

Scalable's Asset Vision platform offers several features that make it ideal for supporting cloud migration and management of the resultant environment.

Single pane of glass

Many tools only give you the ability to look at those of your assets that reside in the cloud. Scalable's "single pane of glass" concept means that you can see what's going on both in the cloud and in your own on-premise data center, as well as across your workstations and other platforms. This is important when you are planning and managing a cloud migration, and equally so when you've completed your migration and need to make sure it keeps delivering value. You can easily compare different scenarios without needing to worry about which application is running where.

Integrated platform

Many products in this market are modular in a bad sense – they are stitched together from various products (typically one for on-premise and one for cloud), and the components don't always work well together. In addition, each module usually has to be licensed separately. License Scalable's product, on the other hand, and you get a complete, fully integrated solution, designed and built by us from the ground up. You are free to use whichever elements you need from day one.

Normalization

This is the process of translating raw data that the system collects about your IT assets into a meaningful description that helps you with activities such as licensing – and indeed planning what to move to the cloud. Any piece of software or hardware that our software detects gets automatically checked against a central normalization database. This enables us to say that, for example, the task that a particular user is running is part of Microsoft Office 365, and we can then link this fact to the relevant licensing information. Scalable's platform can recognize 80% or more of applications straight out of the box – a strength that greatly reduces the amount of manual effort you will need to put in (though you can of course add your own apps to the catalog – see "Customization" below). This strength is due to our integrated, cloud-based, and crowd-sourced recognition engine, which has more than 1,500,000 entries. In addition to simple recognition and normalization capabilities, we also provide release and end-of-life dates, license metrics, and more – all of which adds up to insights you can act on.

Asset Vision can support you during cloud migration and beyond

Customization and integration

If you need to record asset information unique to your organization, whether manually or automatically, Asset Vision IT asset management products will do the job. Asset Vision provides for custom field creation, either creating entirely new objects or extending existing objects. This feature can be used, for example, to keep track of the locations where an asset is being used, which can help optimize usage. Once defined, customization survives all platform updates and can be incorporated into any of the business intelligence functions.

Highly granular information

Many platforms will simply tell you whether a piece of software is in use at a given location, but our information is much more granular. You get detailed intelligence about how people are interacting with their workstations – for example, you could see that a given user used Outlook for three hours today and that this involved 2,000 keystrokes, and that they later moved on to Excel. The value of this in planning a cloud migration is that you can analyze trends and work out, for example, which users might be satisfied with the browser-based version of Office tools and which need the full-blown application. You could also work out which users might be able to use a cheap Chromebook instead of a high-powered laptop. This helps you go from a high-value capital asset estate to one that uses much cheaper devices or maybe even BYOD.

Full visibility of cloud use.

Asset Vision gives you a complete picture of what cloud apps and services are being used across your organization, including any shadow IT. This makes it possible for management to eliminate cloud sprawl and cloud shock, and to ensure that secure practices are followed. That way, you can keep control without unnecessarily restricting what the business can do.

Intelligent insights, fast.

Asset Vision provides actionable insights after just two weeks of data capture, thanks in part to our inbuilt analysis and reporting engines.



Scalable Software, an innovator in SaaS based ITAM and SAM since 2008, helps companies lacking clarity around IT inventory, license liability, usage and even asset location. Our Asset Vision® service automatically identifies IT asset usage to achieve both targeted cost savings and ongoing cost management.

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