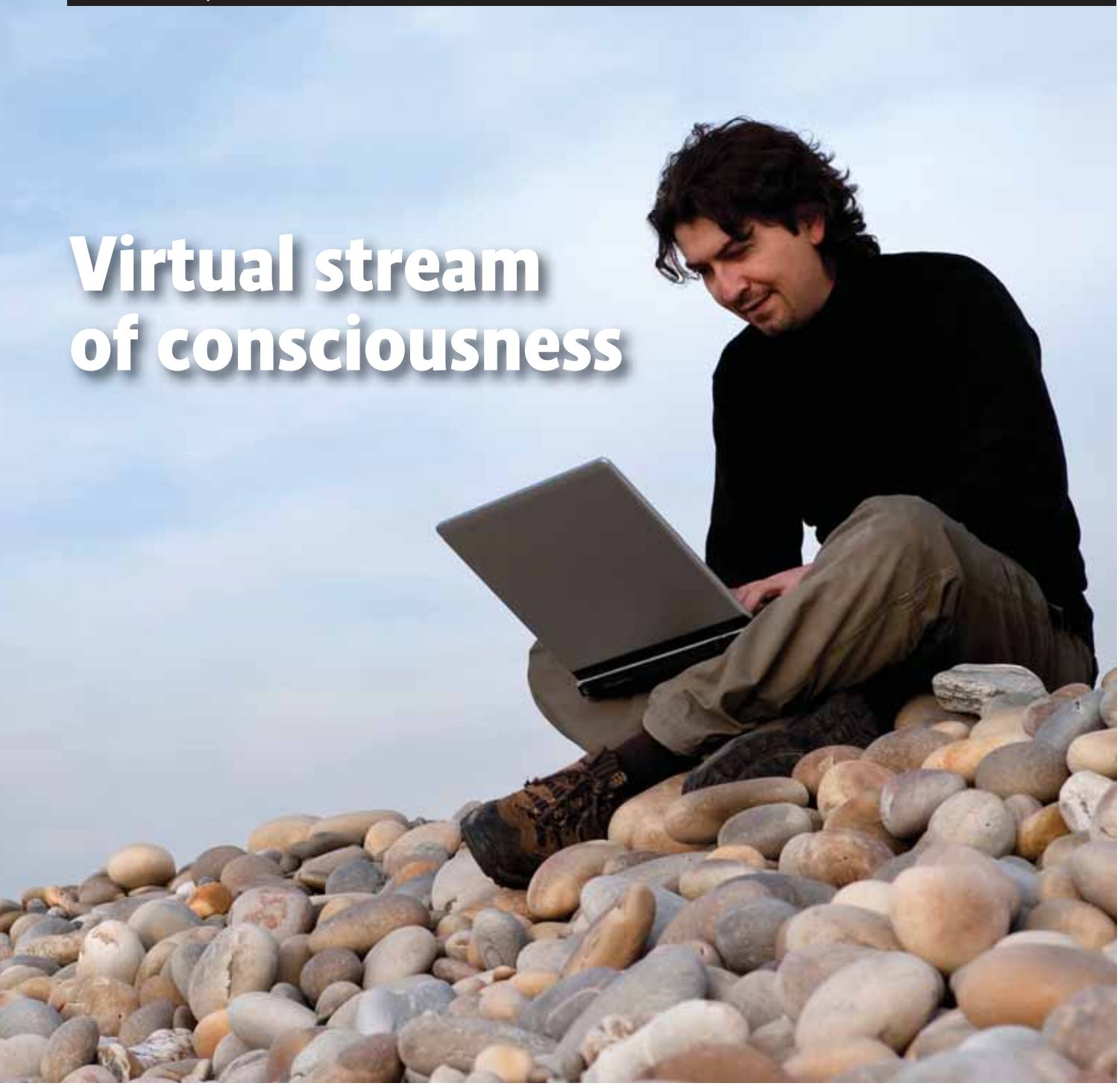
Virtual stream of consciousness



Patrick Gunn, Vice President EMEA, ManageSoft, looks at application virtualisation and the issues of software licensing.

While many IT organisations have deployed data centre server virtualisation, another technology called application virtualisation has more recently gained some traction in the marketplace. Both virtualisation technologies offer a number of benefits, but they also bring along a set of issues related to software licence compliance. The added complexity of either type of virtual environment requires a conscious effort to implement a process for efficiently managing software assets while adhering to publisher licence terms and conditions.

What is application virtualisation?

There are several flavours of application virtualisation, just as there are with server virtualisation. Some vendors, such as Citrix, provide both server-side and client-side application delivery models. In the server-side case, the software is fully installed and actually runs on the server itself. Only the user interface aspects of the application – keyboard strokes, display information and mouse clicks – are relayed back and forth to a client installed on the endpoint device.

On the other hand, client-side application virtualisation entails the delivery of an encapsulated software executable, or series of executables, from a central file server or network share to the desktop or other endpoint. The application package runs in isolation on the endpoint machine.

Application streaming involves delivery of portions of the application on-demand, so you only

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get what you need, when you need it. Both the server-side and client-side approaches enable the delivery of applications without fully installing them on end-users' machines.

The benefits

Application virtualisation offers a reduction in application to operating system and application to application compatibility issues and shortens the associated regression testing time required to uncover such problems. It also provides a mechanism for instant failure recovery through replication, analogous to what can be done in server virtualisation. Software management is also easier, since only a single copy of an application needs to be installed and maintained in the data centre, rather than thousands of copies on desktops and laptops.

All the well known server virtualisation vendors are players in the application virtualisation space – Citrix (XenApp), Microsoft (App-V, formerly Softgrid), and VMware (ThinApp). Several other companies also have offerings, including InstallFree, Symantec and Xenocode.

The problem

The core issue related to application virtualisation and licence compliance is this: the application virtualisation vendors' policies are typically on a per-user basis, whereas the application publisher's licence terms are often based on the device. The per-user approach makes sense from the standpoint that application virtualisation enables users to access a set of applications from any endpoint device – that's one of the benefits of the technology. But the traditional desktop application licence model is per device.

For example, in the Microsoft Licensing Product Use Rights guide, there is a description of the Microsoft policy related to the remote access of software. It says:

- You may access copies of the software installed on a network device only from a device that has a licence for the software.
- You may install those copies on the host operating system or in a virtual hardware system.
- Each device must be licensed for the same or higher edition as the remote installation (e.g. MS Professional versus MS Standard).

Obviously, it can be very complicated to apply these licence rules in the context of application virtualisation. First, you have to figure out which computers are used to access the software remotely, and know whether there is a licence for that application allocated to that device. Second, the software edition for that licence must be known and compared to the server licence, for the server that is delivering the application.

Application streaming involves delivery of portions of the application on-demand, so you only get what you need, when you need it.

This implies that you can determine which endpoints are connected to a given server for a particular virtualised application. From the server, you must determine which users accessed which applications – there is generally no trace of the software in the endpoint inventory, since the software is not actually installed there. Bringing endpoint and server licences, as well as software usage from the server, all together and applying the rules is quite challenging.

With application virtualisation, it is harder to track which user has been accessing an application, and from which device. What you don't want to have to do is purchase licences for all possible endpoint computers that potentially could be used to access a set of virtualised applications. Ideally, you only want to licence the machines that will actually be used for this purpose.

An automated SAM solution is the only effective approach to maintaining compliance in an application virtualisation environment.

Licence management

Some application virtualisation vendors provide a partial solution to the licence management issue, which from an enterprise's perspective makes vendor compliance very complex. For example, Citrix's application virtualisation product XenApp offers limited licence management that enables enterprises to know how many application licences are available, and how many times an application is in use, on a concurrent basis. However, users can install XenApp client without the need for 'administrator privileges,' making it very easy for users to access virtualised applications from any device.

While application virtualisation is most useful when making the application accessible throughout a secured estate, it guarantees a dynamically changing licensing position. The vendors of the majority of such technologies, however, do not provide any licence management mechanism. This simply isn't their area of expertise or business focus. Therefore, any technology that is going to automate SAM in this incredibly complex and dynamic arena must be able to not only pull in data from multiple sources, but also have the flexibility to normalise and interpret this data against an array of complex software licensing rules from many software publishers.

Deployment

In an application virtualisation environment, a product use right is based around deployment. If an application is deployed, then a licence is required, and typically the application licence is associated with the endpoint device, not the user.

Therefore, it is important to be able to measure when, where, and by whom the software is in use and if it is appropriately licensed. In addition, if the definition of deployment includes being available remotely, then controls need to be put into place to ensure that unauthorised machines do not have access to the software.

Alongside standard SAM processes, it is crucial to have powerful inventory, usage monitoring, and licence management tools that can collect all the necessary information, from both client devices and servers, and reconcile usage against licence entitlement. Additionally, dynamic SAM tools must utilise usage information from the framework that supplies the applications, such as APP-V, Thinstall or XenApp.

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