 Virtualisation changes everything and the road to the 4-pool vision of utility computing has to take into account the lead that server hypervising already has. While hypervising in the storage, client and networking areas can rightly be considered as separated functions, many of their suppliers work by addressing the APIs already established and offering management through plug-ins. You may be interested in our take on the current state of play to help formulate your plans. The data presented here comes from ITCandor's Market Model and assesses the numbers of servers installed and in use by customers and the revenues of their vendors.

How server virtualisation breaks down by type of machine

- Mainframe and Unix – the operating systems for System z and Power Systems from IBM, Sparc from Oracle and Integrity systems from HP are all virtualised of course; in total there are around 1.3 million of these currently installed worldwide and although the number is far smaller than the x86 base, these are serious and typically much larger machines; in terms of revenues they accounted for $17b in 2011 – 29% of server spending
- x86 – in total the installed base stands at 41 million worldwide, worth $43 billion in 2011; however 30 million ($33 billion) are physical-only machines; so by our calculations there are 11 million ($10 billion) on which customers run server hypervisors.

How market shares look like on virtualised x86 servers

There are four server hypervisors and associated systems management programmes running on virtualised x86 machines. In particular:

- VMware's ESX/ESXi has a clear lead, with an installed base of around 7.6 million ($6.6 billion); vCenter is clearly the first virtualisation storage hypervisors need to address when adopting an API/plugin approach
- RedHat's KVM (which is now a standard part of Linux) is the next largest, with an installed base of 1.6 million ($1.1 billion), accounting for 14% of virtualised x86 servers; RHEV3 is the management suite, although a different sort of target for

storage virtualisation due to the Open Source status of Linux
- Xen accounts for 1.1 million servers ($1.2 billion) and has been deployed both in early Open Source versions (where it now competes against KVM) and as part of Citrix XenServer; storage companies tend to address Citrix, rather than Open Source Xen
- Microsoft Hyper-V is in third position with a worldwide installed base of 960k ($854 million) – 11% of virtualised x86 servers; sizing its success is challenging, given the fact that Hyper-V is itself free and our estimates are for the number of these servers on which virtualisation is deployed; nevertheless Microsoft's System Center is a vital management suite for storage companies to address, often with separate client and server plugin versions

If the work 'typical' can apply to the approaches of storage hypervisor vendors, the order in which the x86 server virtualisation management environments are being addressed is VMware to Microsoft to XenServer, followed by KVM – with many not yet getting beyond the first 2. Of course there are choices of how strongly to pursue a plug-in approach, the focus on client and server virtualisation and the balance between playing in proprietary or Open Source markets. We've spoken to a number of users who are building alternatives to their VMware environment, which adds an element of uncertainty to your planning processes: after all you will want to intersect future virtual server deployments as well as addressing the largest opportunity in terms of market share.