



SERVER FAULT TOLERANCE

# Marathon FTvirtual Server 6.1.2

PRICE £7,964 exc VAT for uni-processor support (includes 1yr support)

UPGRADE Included in maintenance contract

SUPPLIER Marathon Technologies 0118 949 7308 INTERNET www.marthontechologies.com

VERDICT A smart software fault tolerance product that runs on standard Intel servers and blades, is easy to manage and configure, and looks better value than clustering or proprietary hardware.

The fault-tolerant server has traditionally been well beyond the means of most SMBs. But Marathon's FTvirtual Server (FTvS) aims to deliver these very services with a keen eye on value. It's quite unique, as FTvS is software that supports standard Intel-based servers and blades, so unlike products that use proprietary hardware it won't lock you in with one vendor.

The concept centres round the use of a pair of identical servers and these must have exactly the same processors, memory and even BIOS versions. FTvS can use Pentium 4 and Xeon processors, and this latest version adds support for Pentium D and dual-core Xeons. The physical servers, or CoServers, are linked together and the FTvS software presents a single virtual server to the network. The servers are lockstepped so transactions are executed simultaneously on both CoServers to ensure they're synchronised perfectly. As all components are duplicated, if any fail the software moves all operations to the working component. This also applies if a complete CoServer fails. The shift in operations is conducted automatically and seamlessly so users will be unaware of any problems. Marathon's optional SplitSite feature allows the two servers to be placed up to 100 miles apart to provide site disaster tolerance.

For testing, our thanks go to Boston for supplying us with a matched pair of Supermicro low-profile rack servers equipped with 3GHz Pentium 4 HT processors, 512MB of PC3200 SDRAM and an 80GB Serial ATA hard disk. The first task is to decide how the servers are to be connected together. For lockstepping to function, the servers must be linked directly by up to two Gigabit Ethernet crossover cables. You'll also need adaptors for presenting your services to the network over a virtual connection and you can optionally use a

fourth for isolating management access. In our test scenario, we complemented the embedded Gigabit adaptors with an Intel Gigabit card and went for single CoServer, redirected and management links.

Your first job is to install the Windows Server OS on each CoServer. Another advantage of FTvS is it doesn't require any modifications made to the OS or proprietary drivers loaded. Once these have both had the relevant service packs applied, you then load the FTvS software on them. This must be done on CoServer1 first, followed by CoServer2, and during these phases you define what roles each network adaptor will play. Using FTvS, we then created a virtual boot disk on the physical drives, after which we loaded a third copy of the OS. Finally, you load the FTvS software on your new virtual server, and then you can install your chosen applications.

The supplied Manager utility can be accessed locally from within the virtual server desktop, from either CoServer, via a Remote Desktop link or from a separate Windows client on the optional management LAN. The simple main interface shows the status of all servers along with redirected devices and you can shut down or restart the virtual server, the CoServers

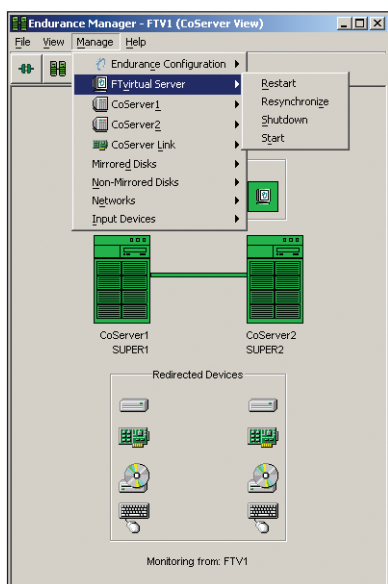
or the entire FTvS environment. A separate Device Redirector utility is used to configure virtual devices and from here you can create new virtual disks. Once ready, they'll be automatically mirrored across the CoServers. It's a pity the Manager doesn't offer any alerting facilities, as it would make sense if it could send out email or pager messages to warn of a failure. Marathon does provide an SNMP MIB, but smaller sites are unlikely to have an SNMP management product already available to be able to use this. You'll also need to manually update the servers on a regular basis with the latest patches and hot-fixes and schedule a full restart to ensure all three are running precisely the same updates.

To test fault tolerance, we mapped the virtual disk to another Windows Server 2003 system and ran lometer

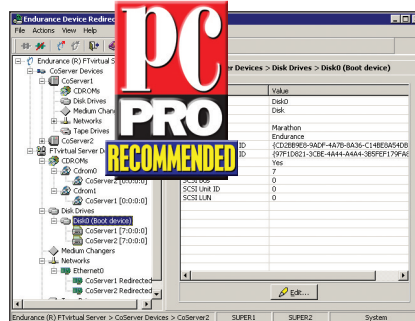
on it, configured for continuous read operations. To simulate a complete CoServer failure, we simply powered one off from the front panel. The Manager utility changed to reflect the loss of a server, but lometer didn't bat an eyelid and continued unabated. However, we did see the effects of lockstepping; as now this wasn't being performed, lometer reported an increase in read performance of around 15 per cent for the virtual disk. We also set up web and FTP services on the virtual server and fired a copy of a 700MB file to an XP client on the LAN. We simulated the same system failure and watched the FTP transfer complete without any problems. In both cases, when the second CoServer was powered up the disk mirrors automatically resynchronised and fault tolerance was restored without any user intervention.

We're impressed with Marathon's FTvirtual Server. It performed well in the lab and clearly doesn't need a huge amount of support resources to manage and maintain. Alerting facilities need to be improved, but otherwise this would make an ideal option for smaller businesses or enterprises looking for fault tolerance at a reasonable price.

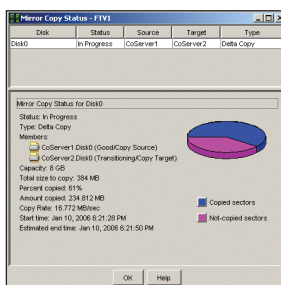
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The Manager utility provides a simple display showing the status of each component along with details of redirected devices.



Devices including virtual hard disks are declared using the separate Device Redirector utility.



During a recovery, the virtual disks are automatically resynchronised and require no user intervention.

**PC PRO RATINGS**

EASE OF USE	★★★★★
FEATURES	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★

**REQUIREMENTS** Windows 2000 Server/Advanced Server; Windows Server 2003 Standard and Enterprise Edition; two identical Marathon-approved Intel-based servers; supports Pentium 4 and Xeon processors.