10 Steps to Extending Server Lifecycle

June 26, 2020

Condusiv®
THE DISKEEPER COMPANY

10 Steps to Extending Server Lifecycle

The current times have caused businesses some hardship. In the IT sector, that hardship has mainly translated into keeping existing hardware up and running and remaining capable of continuing to service existing workloads. More than ever, enterprises are having to “make do with what they’ve got.” to keep budgets in line.

To that end, here are 10 powerful tips to extend server lifecycle.

1. Maintain a proper server environment

A server’s lifecycle can be seriously impacted by the environment in which it’s placed. The space should be free of dirt and dust. It should have a controlled temperature so that servers don’t overheat or encounter other temperature-related issues. Servers should be serviced by a clean and uninterrupted power supply, so that crashes due to temporary power losses are avoided. Once a quarter, it’s a good idea to remove debris and dust from your servers using compressed air.

2. Keep a current maintenance contract

Another method of extending server lifecycle, and ensuring they continue to perform at optimum efficiency, is to make sure professional maintenance is conducted on them regularly. Unless your company has an excess of IT staff, such maintenance is best obtained through a maintenance contract which can be obtained at reasonable prices from reputable service companies. It is often worthwhile to spend the money on such a contract rather than be “penny wise and pound foolish” trying to handle maintenance internally.

3. Make sure storage is being efficiently used

Your server isn’t for archiving. Make sure that unneeded software, old logs and emails are deleted and not taking up unnecessary storage space. Perform regular scans of servers and remove out-of-date software versions and old files. Depending on the backup and recovery solution you have in place, faster recovery might result from a smaller data footprint.

4. Watch for hardware errors

You should regularly check your system for symptoms of hardware issues. Indications such as data not replicating properly, notices of overheating, network problems, and disk read errors could point to potential very costly hardware failures.

5. Streamline I/O operations

The Windows file system creates small, fractured and random I/Os as the regular method of I/O operation. That means that the operating system must process multiple I/Os where a single one would be far more efficient in terms of overhead. Sequential I/Os instead of random I/Os also save substantial resources—both virtual and physical. You should implement an I/O optimization solution to ensure large, clean contiguous writes.

Additionally, SSDs are prone to an undesirable phenomenon called the Write Amplification Factor (WAF). You can read more about how to resolve this in Do SSDs Degrade Over Time?

6. Eliminate I/O contention

Within virtual environments, I/O contention is caused by multiple VMs sharing the same storage resources. Known as the "I/O Blender Effect," this phenomenon mixes and randomizes I/O streams. Implement an I/O optimization solution designed specifically for virtual environments.

7. Monitor server utilization

Pay attention to capacity as regards the network, storage, RAM and CPU. If you're nearing limits, you should implement step 10 below.

8. Keep user accounts current

When it comes to IT having to keep track of user accounts, one thing is constant: change. Staff come and go. New clients come on and are given guest accounts; other clients come to the end of their relationship with your company. As much as possible, you'll want to stay on top of such changes and remove old users from your system. It's both a security and a legal risk to keep old sites and users storied on your system. Additionally, you might want to change passwords for any accounts previously given to contractors.

9. Update the operating system

All operating systems are regularly updated. Many of these updates address important security issues. If you don't have a service or automatic updates enabled, you should review your operating system regularly for critical security updates. To be informed of when patches are released, make sure you're on the mailing list for your operating system.

10. Put Diskeeper and V-locity to work on all your servers

The last, but certainly not least, method for extending server lifecycle is the installation and utilization of Diskeeper® and V-locity® software. These solutions can regularly extend hardware life by 3 – 4 years, and longer, according to users.

Heavy thrashing experienced by storage under normal circumstances takes its toll in wear and tear. Because Windows randomizes and fractures I/Os, I/O traffic to drives is increased significantly. Not only are tiny writes—and therefore reads—occurring constantly, but because they're happening randomly instead of contiguously, reading and writing become far more laborious than they need to be.

Diskeeper, through patented technology, creates large, clean contiguous writes from Windows in real-time, preventing fragmentation on HDDs or SSDs. In addition to the benefit of providing considerable ROI by extending hardware life, Diskeeper renders better application performance, shorter backups, faster data transfer rates, reduced timeouts and crashes, and improved savings.

To substantially reduce read I/Os, Diskeeper caches hot reads so that Windows does not need to hit the disk every single time frequently accessed data is required.

V-locity is specially designed to speed up and significantly optimize virtual environments. Like its cousin Diskeeper, it creates large I/Os at the source so that write I/Os are large and contiguous, and caches reads server-side so disk access isn't required for them.

In addition to the considerable hardware lifecycle provided, V-locity regularly provides 30 – 40 percent faster data transfer speeds and eliminates a host of Windows performance problems.

As noted earlier, in virtual environments I/O contention is caused by multiple VMs sharing the same storage resources. This phenomenon, known as the "I/O Blender Effect," mixes and randomizes I/O streams. V-locity eliminates this issue.

With lockdowns still in place and many companies still working from home, VDIs have become the order of the day. V-locity can double VDI capacity on existing hardware.

See just how budget-friendly Diskeeper or V-locity can be in extending your hardware lifecycle an additional 3 to 4 years. Its easy, its fast and no reboot is required. You can

be up and running in minutes with your servers and applications running better than ever. Request a quote for your environment and an account manager will contact you.