

Dynamically tune performance

HPE Intelligent System Tuning

Revolutionary capabilities in one unique solution

HPE Intelligent System Tuning includes these groundbreaking technologies:

- **Jitter Smoothing**—Patent pending technology that levels and balances the frequency fluctuation created when a processor runs in Intel® Turbo Boost mode.
- **Workload Matching**—Time-saving technology that enables you to choose from preconfigured workload profiles to automatically tune internal server resources and improve server performance.
- **Core Boosting**—Unique technology jointly designed by HPE and Intel that enables higher performance per core, resulting in significant savings in core-based licensing.



Want to do more and spend less?

To keep your competitive edge in today's fiercely competitive marketplace, you need superior performance from your servers.

Like many organizations today, your road to success might be blocked by:

- Struggling to achieve peak server performance while also controlling costs
- Operating in a one-size-fits-all server environment that does not support customization of hardware resources to match the needs of each workload

If you are ready to break free from these restrictions, then the time is right to deploy HPE Intelligent System Tuning (IST).

Revolutionary server solution

Available in **HPE ProLiant Gen10 servers**, HPE IST is a new set of revolutionary capabilities that deliver higher levels of performance, agility, and control to your server environment.

With these groundbreaking new features, you can:

- Dynamically tune your servers' performance to match the needs of each workload
- Drive real cost savings
- Radically improve your server performance

Save time by leveraging our experts

Take the guesswork out of BIOS settings with Workload Matching. Developed by the HPE performance engineering team, HPE Workload Matching allows you to simply choose a workload profile and the server will automatically configure the server's internal resources to match the needs of that workload. Leverage the experience of HPE's performance engineering teams to save hours of time tuning your servers and improve overall performance.

Solution brief

12%

Jitter Smoothing can improve Intel processor frequency by up to 12% over base with low latency and deterministic processor performance.¹

10%

Get 10% more Virtual Machines (VMs) with Core Boosting.²

14%

Achieve up to 14% higher compute performance with Core Boosting.³

^{1, 4, 5} HPE internal testing from the Performance Engineering Benchmarking team, April 2017.

^{3, 7} Comparing the Intel 1643 16-core processor to the 6142 16-core processor. HPE Internal Benchmark Testing, August 2017.

^{2, 6} Comparing the Intel 1643 16-core processor to the 6142 16-core processor. VMmark® is a product of VMware®, Inc. VMmark results published as of 08-26-17. VMmark disclosures available at hpe.com/h20195/v2/Getdocument.aspx?docname=a00023030ENW and hpe.com/h20195/v2/Getdocument.aspx?docname=a00023031ENW.

⁸ HPE internal testing from the Performance Engineering Benchmarking team, April 2017 & [Reducing costs in your Oracle database environment](#).

Smooth out performance “jitters”

If your company operates in an ultra-high-speed market—such as high-frequency trading—every microsecond counts. You'd like to use Intel Turbo Boost mode to fulfill your need for speed, but you can't afford the accompanying jitter.

For example, when using Intel Turbo Boost, changes in workloads require a processor to change frequency. Each change in frequency introduces unwanted latency. The fluctuation and associated downtime is called “jitter.”

Level and balance frequency fluctuation, minimize jitter, and reduce latency problems while in Intel Turbo Boost Mode using patent-pending technology. Jitter Smoothing mitigates processor frequency fluctuation and can improve Intel processor frequency by up to 12% over base with low latency and deterministic processor performance.⁴ In some cases, Jitter Smoothing can even deliver workload throughput above Intel Turbo Boost mode alone for an even higher performance improvement.⁵

Maximize performance while driving down costs

Maximize the performance of all of the cores in your processors. Core Boosting is ideal for virtualized environments, high performance computing, and Big Data analytics where maximum performance is required.

Developed through a joint engineering effort with Intel, Core Boosting is an HPE unique technology that enables higher performance per core without overclocking the processor.

So what kind of performance improvement can you expect? Leverage Core Boosting and get 10% more Virtual Machines (VMs) or achieve up to 14% higher compute performance.^{6, 7}

Core Boosting also helps to drive down licensing costs. Lower your core-based licensing costs by up to \$100K per year using fewer cores to achieve the same levels of performance.⁸

Understand the system requirements

Workload Matching requires:

- HPE ProLiant Gen10 server
- HPE Integrated Lights Out (iLO) 5

Jitter Smoothing requires:

- HPE ProLiant Gen10 server with Intel processor
- HPE iLO 5
- HPE iLO Advanced license or Advanced Premium Security Edition license

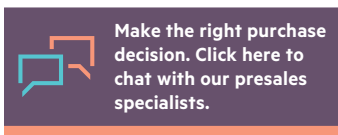
Core Boosting requires:

- Select Gen10 server configurations
- Intel® Xeon® Scalable 6143 Gold 16-core Processor or Intel Xeon Scalable 8165 Platinum 24-core Processor
- HPE iLO 5
- High Performance Heatsinks and Fans
- HPE iLO Advanced license or Advanced Premium Security Edition license

Get ready for exceptional server performance

Contact your HPE representative today to learn more about the benefits of using HPE Intelligent System Tuning on HPE ProLiant Gen10 servers.

Learn more at hpe.com/info/ist



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