Executive summary

Upgrading 1,000 users to new HP EliteDesk 800 G4 desktops with Intel Optane memory could save millions in productivity costs over three years

Replacing older EliteDesk 800 G1 devices with current-gen desktops equipped with Intel Optane could help employees accomplish work faster

If your employees are getting by with desktops that are a few years old, you might think waiting a few more years to upgrade can save your company money. However, the latest hardware from HP and Intel could deliver better desktop performance at a lower cost.

At Principled Technologies, we tested two configurations of HP desktops:

- EliteDesk 800 G4 with 16GB RAM and 16GB Intel® Optane™ memory
- EliteDesk 800 G1 with 32GB RAM, without Intel Optane

Across a range of tasks in common applications, the new desktop with Intel Optane memory outperformed the older desktop with 32GB RAM, completing tasks in up to 88.2 percent less time.

We also analyzed the ownership costs that a hypothetical company purchasing systems for 1,000 employees could expect. Even when accounting for the price of new hardware, we estimate that increased work productivity can yield over $3.5 million in savings over three years.

A new desktop with Intel Optane memory outperformed a first-gen desktop

Up to **88%** **less time** to perform everyday tasks

Potential savings of **$3,599,534** across 1,000 users over three years

A faster system with Intel Optane

We performed 17 tasks on the two HP EliteDesk 800 desktops. These tasks included powering on the system, launching applications, and opening large Adobe® Photoshop® files. The G4 desktop with Intel Optane took less time to complete each task than the G1 desktop with 32GB RAM. The time saved ranged from 28 to 88 percent, with most tasks requiring 71 percent less time (or more) to complete on the newer desktop.

A boost in productivity saves time and money

To estimate the productivity savings a company could yield from choosing the HP EliteDesk 800 G4 with Intel Optane, we used a hypothetical organization shopping for 1,000 desktop systems. The employees that will use the systems fall into three groups, each with specific application needs: communicators, content creators, and data analysts.

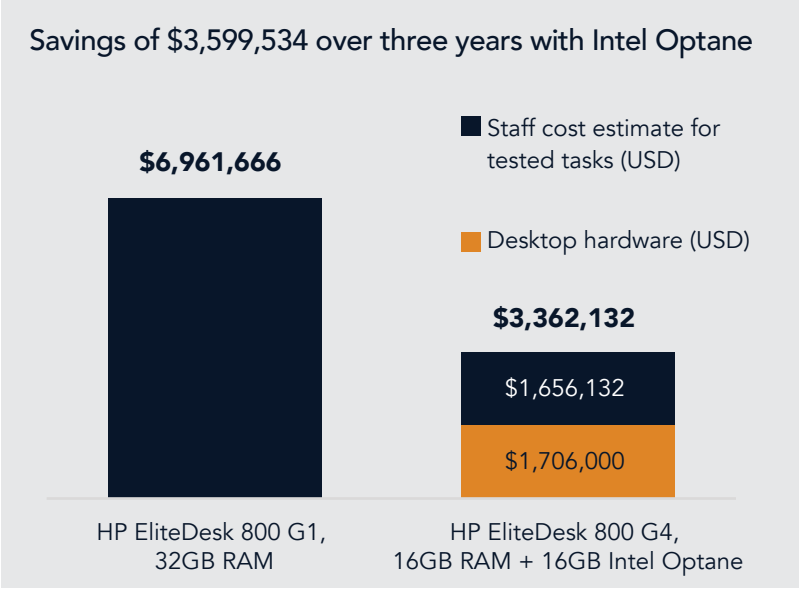
We calculated the weekly productivity cost for each task on each device by multiplying the following:

- Task frequency per week across the 1,000 users
- Tested time (in seconds) to complete the task
- Cost per second (based on estimated employer cost for salary and benefits)

We then added the costs per task and device and multiplied this number by the total number of weeks in three years.[1]

By choosing the newer desktop with 16GB RAM and Intel Optane, the company saves by gaining employee productivity as a result of improved system and application performance—even despite the cost of new hardware.

As the chart to the right shows, the three-year cost for these 1,000 workers in our model was $3,599,534 lower for the HP EliteDesk 800 G4 with 16GB RAM + 16GB Intel Optane than it was to continue using the older hardware.



Newer hardware pays for itself in short order

Our hands-on tests with Intel Optane show that newer, high-performing desktops can boost employee productivity to the point where the machines could pay for themselves in even less than a year. In our tests, an HP EliteDesk 800 G4 with 16GB RAM and Intel Optane saved enough time on common office tasks to offer millions in productivity savings over the course of three years.

1 Learn more about our testing and cost analysis in the full report, and get all the details in the science addendum to the report.

Read the report at http://facts.pt/rrtgj02 ▶

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This project was commissioned by HP.