Optimize Your Cloud Investments With AMD EPYC™ & Densify

With Densify, you can:

- Achieve total visibility of cost, risk, and performance across all your public cloud instances
- Gain actionable insights to reduce public cloud spending and improve performance
- Embed Densify into cloud management to sustain best value for every cloud workload

Optimize the performance and value of your public cloud investments with Densify. It's the award-winning analytics service that identifies the right instance for every workload with forensic precision – and gives you easy-to-action results.

Extending power and choice in the cloud

Innovative AMD EPYC™ processors have challenged the status quo in the server processor market and empowered businesses to achieve compelling value from their server investments. As well as switching to AMD EPYC processors in physical servers, customers can choose from a great range of public cloud instances on AMD EPYC that cater for a wide range of general purpose and High Performance Computing (HPC) workloads.

To help customers quickly and confidently identify the cost savings and performance gains they can achieve from AMD-powered instances in public clouds, AMD has partnered with Densify.

The Densify service can reduce an average business's cloud spend by 42% in just 6 months[1], alongside performance improvements of 62%[2].

With spending on public clouds expected to double in the next four years, and businesses set to invest $500B per year in public clouds by 2023[3], the potential gains from Densify are simply too big to ignore.

What is Densify?

It's an automated investigative tool that analyzes server instances in public clouds like Amazon Web Services (AWS), Google Cloud Platform, IBM Cloud, Microsoft Azure, and Oracle Cloud.

Densify is an award-winning service already chosen by many Fortune 500 businesses and leading global brands. Densify is widely used in heavily regulated industries like financial services, banking, healthcare and more[4], giving you the reassurance that you can choose Densify with confidence.

How does Densify work?

The Densify service uses a machine learning analytics engine to evaluate workload placement within an existing public cloud estate. It quickly identifies application demand patterns in critical areas like CPU, memory and I/O.

Then Densify benchmarks these learnings against the cloud provider's entire instance catalogue, using performance benchmarks and cost metrics, to identify the optimization opportunities that could be achieved by moving workloads onto AMD EPYC-powered instances.

Just as important, Densify provides risk management information that proves the safety of migrating workloads onto AMD.

With Gartner having identified over **1.7 million**[5] potential considerations when selecting an Amazon EC2 instance, Densify takes away the burden of manually sizing and selecting cloud server destinations. In fact, it requires just 30 minutes of a cloud architect's time to establish your credentials. From then on, the service is completely automated, capturing actionable cost and performance insights in as little as 48 hours.

How does Densify deliver value?

By cross-referencing captured data on the true behavior of your applications against a comprehensive view of potential runtime environments, Densify outputs precise recommendations of what you could achieve by migrating to AMD-powered instances, for example:

OPTIMIZING INSTANCE RESOURCES

CHANGING AN INSTANCE FAMILY

RECLAIMING/TERMINATING UNUSED INSTANCES

OPTIMIZING SCALE GROUPS

UPSIZING/OPTIMIZING GROUPS

RESIZING NODES

OPTIMIZING RESERVED INSTANCES

RENEW/REPLACE LONGSTANDING COMMITMENTS

COMMITTING LONG-TERM TO ACHIEVE BEST VALUE

Balancing your stakeholders' priorities

Densify provides specific reassurance for the most important stakeholder groups that migrating onto AMD-powered instances is a positive and low-risk choice:

- **If you're an engineer or cloud architect** for whom both cost and performance are equally important, you'll see proof that proposed changes won't disrupt critical application SLAs like availability or stability. By visualizing workloads in both existing and potential destination instances, it's easy for you to see the cost and performance advantages on offer and therefore approve changes with confidence.
- **If you're a technical stakeholder**, you'll be presented with the level of granular detail you need to feel reassured that the proposed changes require little effort from you and your team.
- **If you're an IT finance and procurement stakeholder**, you'll gain assurance that the cost savings on offer won't be rejected by IT stakeholders because they'll create a negative impact on application performance.

Densify

AMD

Sustained cost and performance wins

As well as taking advantage of the initial discovery and report service, you can deploy Densify as an essential pillar of your ongoing cloud optimization. Use Densify to ensure your public cloud services are continuously evaluated and refined to deliver the best price, performance and value as your workload demands change. Your business can reinvest the cost savings Densify achieves into cloud instances that improve application performance – a virtuous circle!

AMD EPYC in the Cloud

You can now choose a wide range of AMD-powered instances on your favorite public clouds:

AMAZON EC2 ON AMD EPYC

Choose general purpose (M5a), memory optimized (R5a), or burstable (T3a) EC2 instances.

MICROSOFT AZURE ON AMD EPYC

Choose L and H Series instances that are purpose-built for your HPC Workloads.
Benefit from 33% more memory bandwidth and 2.5x extra speed than in most on premise HPC data centers[6].

ORACLE CLOUD ON AMD EPYC

Oracle Cloud Infrastructure Compute now provides Standard E2 VM compute instances with 1, 2, 4 or 8 cores, up to 64-core bare metal compute instances. You'll gain 33% more memory channels than comparable x86 instances[7].

Innovation for your advantage – today and tomorrow

AMD EPYC server processors are designed to help customers improve the applications that shape our world, from big data to scientific research, and including what's expected be the world's fastest supercomputer[8]. The processor's agility helps businesses manage new deployments and changing workloads with the best-matched computing resources, simply and cost effectively. AMD EPYC's groundbreaking design holds more than 100 world records[9] in industry benchmarks, including the VMmark® 1.43X[10] for cloud and virtualization performance.

Book your Densify assessment now.

www.amd.com/densify

FOOTNOTES

1. Source: On average, Densify customers are able to reduce their cloud spend by 42% in the first 6 months.
2. Source: Densify.
3. Source: https://siliconangle.com/2019/07/04/public-cloud-spending-set-double-next-4-years/
4. Source: https://www.densify.com/company
5. Source: https://www.densify.com/service/cloud-optimization-engine
6. Source: https://azure.microsoft.com/en-us/blog/introducing-the-new-hb-and-hc-azure-vm-sizes-for-hpc/
7. Source: Oracle Cloud Infrastructure Solution Brief, AMD, June 2019.
8. Source: https://www.amd.com/en/products/frontier
9. See https://www.amd.com/en/processors/epyc-world-records for details.
10. Source: loud and Virtualization Performance is measured with VMmark® 3.1: - 2x AMD EPYC™ 7702 scored 12.88 @ 14 Tiles on August 7, 2019 (https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vmmark/2019-08-07-HPE-ProLiant-DL385Gen10.pdf).