



BEST PRACTICES FOR BARE METAL MIGRATION

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Looking to switch to a new [bare metal](#) provider to improve performance, cut costs, or future-proof your infrastructure? Our experts created this guide to serve as your blueprint for a seamless migration—covering key considerations, practical tips to simplify the process, and how Zenlayer can help [accelerate deployment](#) while ensuring long-term performance and stability.



Zenlayer's hyperconnected bare metal servers are geolocated to provide up to 15% lower latency vs. other local providers

Planning your migration

For a smooth transition and to ensure future performance, reliability, and scalability, you should weigh these factors as you choose your new compute partner:



1. Meeting hardware & performance needs

A strong bare metal provider should offer enough flexibility and power to support your workload demands.

If your business needs involve specialized hardware, you'll need a partner who can provide tailored solutions and customizable hardware configurations. For critical applications that have high workload demands, you want a provider who can support [high-performance computing](#) with [low latency](#).

Additionally, a provider that offers self-service, [on-demand provisioning](#) gives you extra agility to quickly adapt to evolving needs as your business grows.

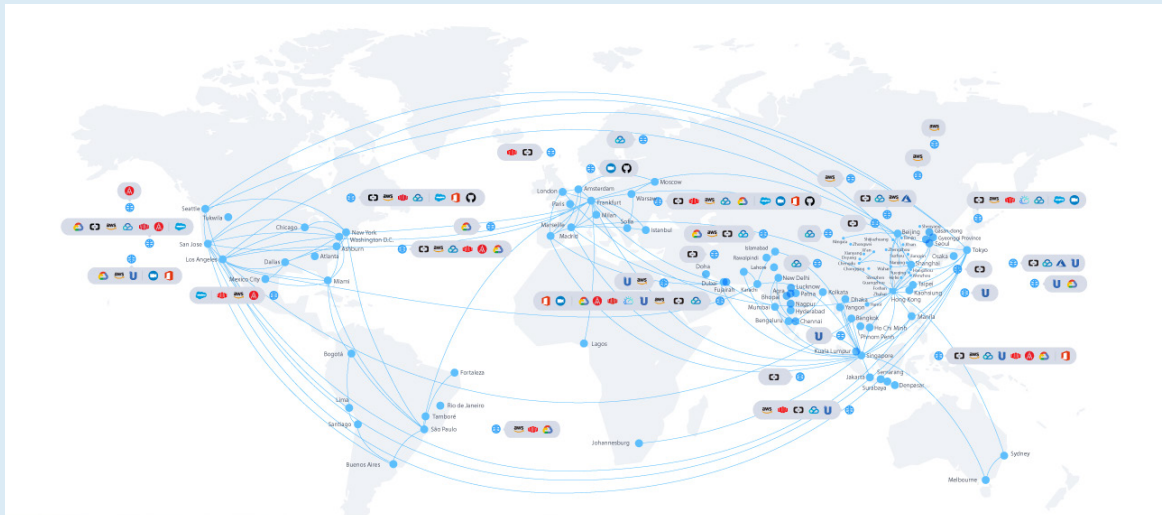
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2. Improving scalability with global coverage

If your business operations cross geographic borders, you'll want to look for a provider with extensive reach that can support both your deployment needs today and in the future.

Global coverage with presence in [key and hard-to-reach markets](#) can be especially helpful if you serve a widely distributed user base. Deploying closer to users helps drastically reduce latency to ensure seamless digital experiences.

Data center neutrality is also critical, as a provider with a wide network of [data center partners](#) gives you greater flexibility in deployment location and configurations.

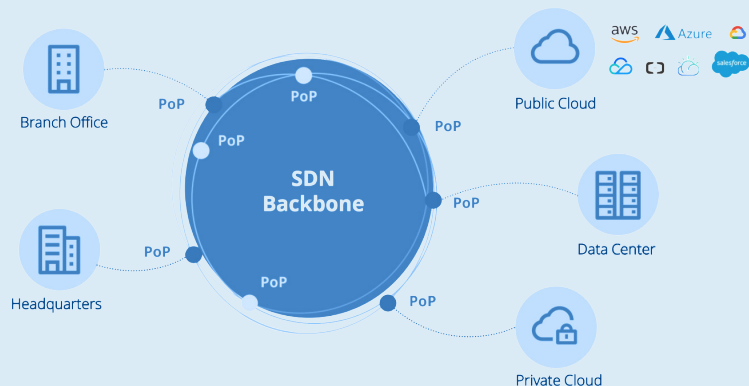


Zenlayer offers flexible, highly scalable compute and network services across 350+ edge nodes in 38 countries.

3. Optimizing network performance & bandwidth

To ensure operational efficiency and smooth integration across your infrastructure, you need a secure, [robust network](#) to interconnect your locations and resources.

Use Zenlayer's high-speed global private backbone to quickly and easily interconnect clouds, data centers, offices, and other locations anywhere in the world.



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For large enterprise workloads, especially those involving [AI training and inference](#), the network needs to support high throughput traffic for large-scale data transfers and low latency for application responsiveness. Using networks that can route traffic dynamically and establishing redundancies help ensure business continuity.

Partnering with a global compute provider with extensive [expertise in IP transit](#), such as Zenlayer, ensures network performance, reliability, and scalability.



4. Connecting to clouds

Direct cloud connections to major cloud providers are key to ensuring performance and reliability if your business infrastructure requires frequent access to cloud resources or leverages hybrid or [multi-cloud environments](#).

Zenlayer's network offers [300+ cloud onramps](#) to the world's top clouds including AWS, Google Cloud Platform, Microsoft Azure, Oracle Cloud, Alibaba Cloud, and Tencent Cloud.



5. Ensuring uptime

Comprehensive support, like Zenlayer's [24/7 global support](#) with regional expertise, proactive monitoring, and rapid ticket resolution through clear escalation paths and SLAs, is essential for seamless migration and continued [operational success](#).

Selecting the right partner not only gives you the technical support you need to troubleshoot and accelerate projects, but also the agility for scalable, reliable growth.



6. Navigating security & compliance

Security starts at the physical layer—secure data centers are the foundation of reliable infrastructure, and your first line of defense against data breaches, regulatory penalties, and other disruptions to your business.

Zenlayer, for instance, works only with providers that demonstrate a strong commitment to physical and digital security, such as offering 24/7 surveillance, environmental monitoring, and biometric authentication to mitigate unauthorized access and ensure operational integrity.

Our [partnered facilities](#) also feature redundant power, advanced cooling systems, and disaster recovery mechanism to minimize downtime and safeguard against failures.

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Certifications like SOC 1, SOC 2, and [ISO 27001](#), which Zenlayer maintains, take a lot of the guesswork out of compliance. Depending on your industry and location, be sure to look out for additional relevant standards like GDPR in Europe, HIPAA for healthcare, PCI-DSS for payment processing, etc.

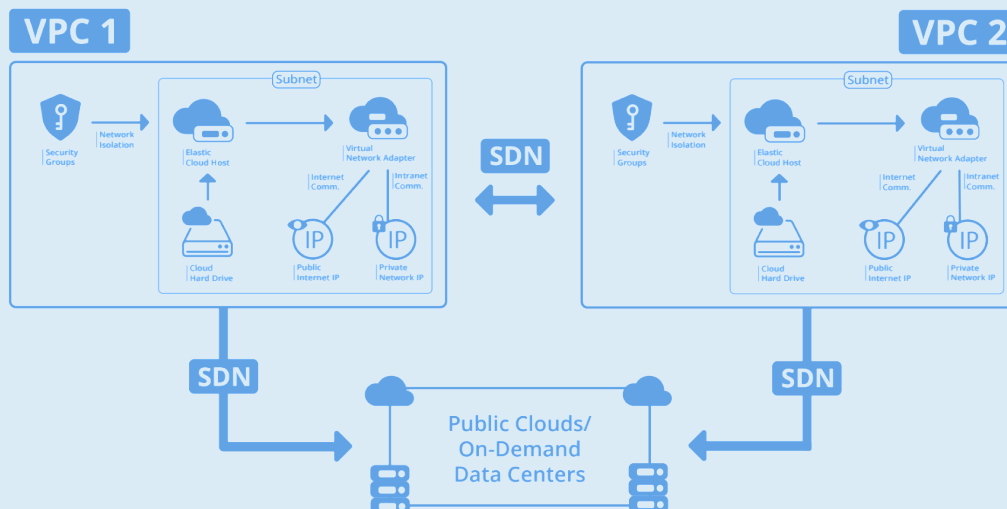
[Coverage](#) cannot be overstated here—look for providers with an established presence in regions you operate to streamline and accelerate [compliance](#) with local laws, such as data sovereignty.



7. Future-proofing your infrastructure

An adaptable, flexible infrastructure with easy scalability is essential to meet growing workloads, user demands, and geographic expansion. Elastic resources, like [virtual machines \(VMs\)](#), can help ensure smooth operations during growth spurts and momentary spikes.

As you think about the future of your business, coverage once again takes center stage as a critical consideration. Partnering with a provider that offers an extensive footprint is key to supporting expansion without disruptions. Zenlayer's roster of nearly 20,000 servers worldwide offers versatile [compute options](#) including bare metal, VMs, and custom compute services in 57 cities across 38 countries. Further, our global network spans [350+ edge nodes](#) across six continents, ensuring that you'll have the support you need no matter where you plan to expand.



Zenlayer VMs provide powerful, cost-effective instances that can be deployed in minutes and scaled on demand.

Future-proofing also means preparing for emerging technologies and shifting operational needs. Providers that support virtualization makes for smoother, more efficient transitions to and from elastic compute, giving you more flexibility and cost efficiency as demands evolve.

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Simplifying your migration

Migrating to a new bare metal provider can feel overwhelming with so many factors to consider. With the right strategy, you can ensure a smooth and successful transition:



Proof of concept (PoC)

Start with a PoC to test your planned build or deployment in real-world conditions before committing. This gives you flexibility to customize your infrastructure for unique needs and opportunities.



IP migration planning

Planning your network cutover carefully is paramount, especially if your business has complex needs like IP migration. Zenlayer supports [BGP](#) and [Bring Your Own IP \(BYOIP\)](#), which lets you retain existing IP addresses to reduce disruption during transition.



Phased migrations

Large organizations should migrate in phases to minimize risks. Start with non-critical workloads to test compatibility and performance, then migrate critical applications and resources once reliability has been validated. Leveraging a secure, high-performance [global network](#) like what we offer at Zenlayer enables fast, efficient data transfers that makes it a breeze to rapidly build and replicate environments.



Expert guidance

Working with [dedicated specialists](#) who offer tailored advice and solutions on best practices, risk mitigation, and a roadmap for success can help lessen internal stress and workloads and minimize any blind spots in your strategy.



Image migration

If you're planning to transition to [VMs](#), migrating server images by replicating the current environment can help minimize reconfigurations and accelerate the process.

Ready to simplify your bare metal migration?

Leveraging our expertise, global reach, and flexible compute solutions, we make the process seamless while ensuring your long-term operational success. Future-proof your infrastructure and optimize your deployment—talk to a Zenlayer expert today.

Contact an expert

Visit zenConsole

