

The Expert Guide to Dedicated Servers: What Your Business Needs to Know

Gain insights into dedicated server configurations, security measures, strategies for finding the best fit for your organization, and more.



Dedicated servers have become the unsung heroes of the modern digital age. The market's steady growth—from USD 16.9 billion in 2023 to a projected USD 81.49 billion by 2032*—highlights the increasing demand for high-performance, secure, and reliable hosting solutions. This guide isn't just another overview; it's the result of years spent addressing the real-world challenges of server infrastructure.

Since 2015, [Melbicom](#) has supported thousands of businesses across industries and continents, providing tailored solutions that span a wide array of configurations and use cases. With over 6,000 active clients today, we've built a foundation of expertise through countless projects, navigating the complexities of high-load systems and scaling strategies. This depth of experience forms the backbone of this guide—a resource designed to offer practical insights and actionable advice.

Here, we'll demystify the world of dedicated servers: whether you're weighing your options against VPS hosting, deciding on configurations, or planning for future growth. We've distilled nearly a decade's worth of knowledge into clear recommendations that empower you to make informed decisions and unlock the full potential of dedicated hosting.

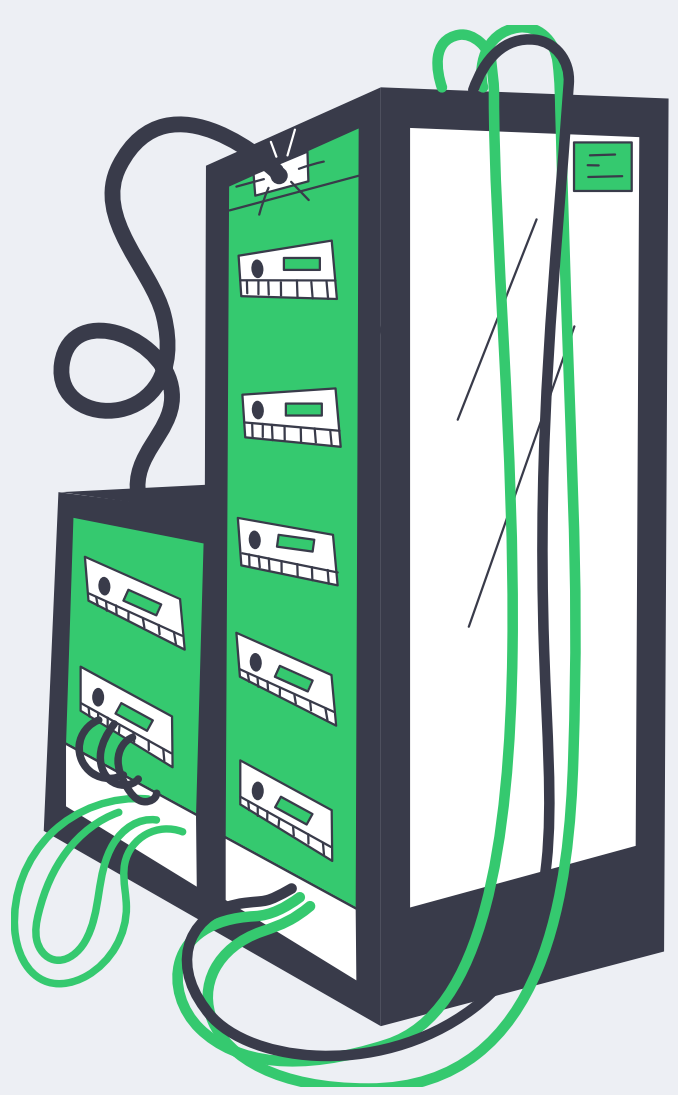
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What is a Dedicated Server?

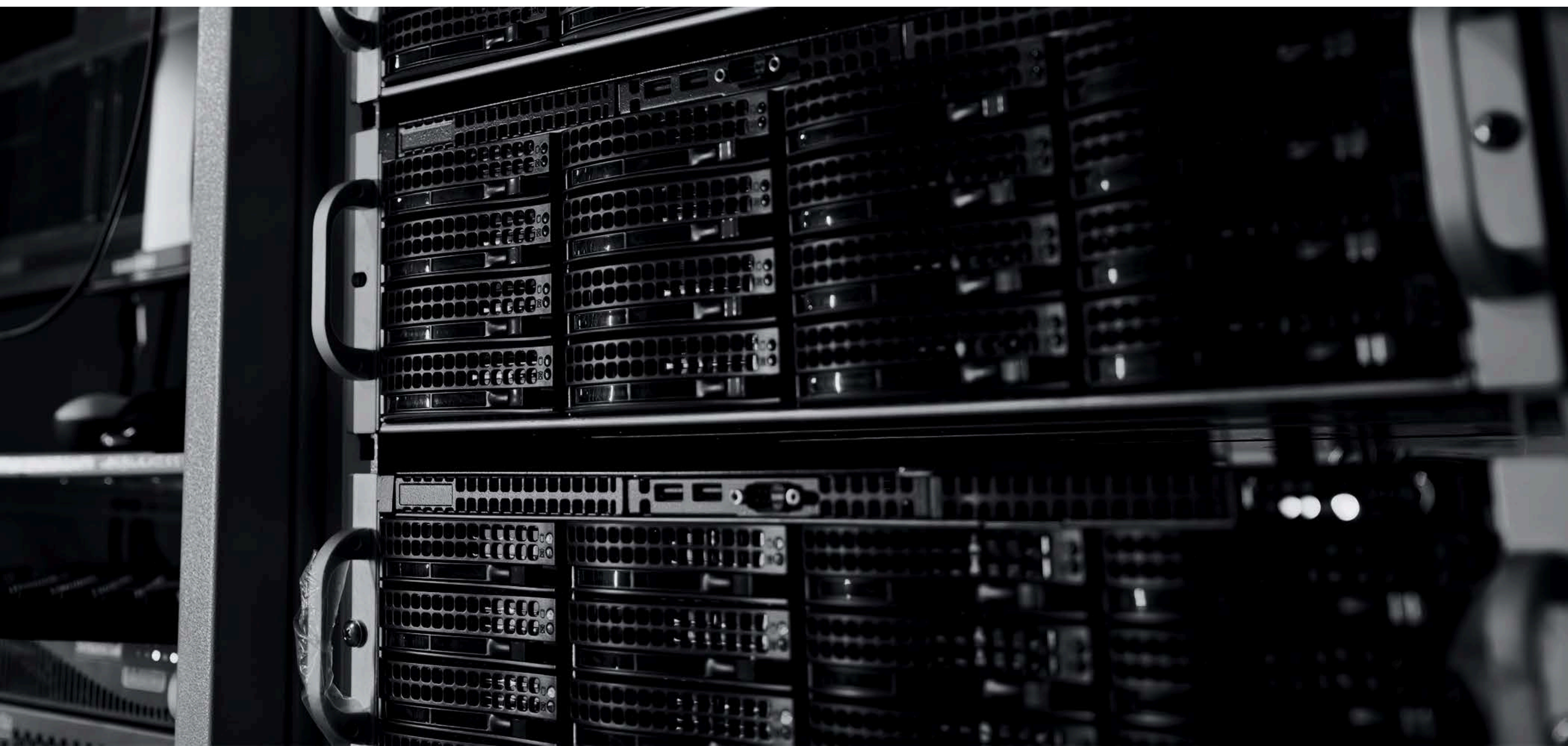
A dedicated server is a service offered by hosting providers. It involves renting a physical server housed in a data center, fully equipped with the infrastructure needed to ensure reliable performance and internet connectivity. The client gains exclusive access to the machine—often pre-configured with basic settings—and is free to customize it to suit their specific needs.

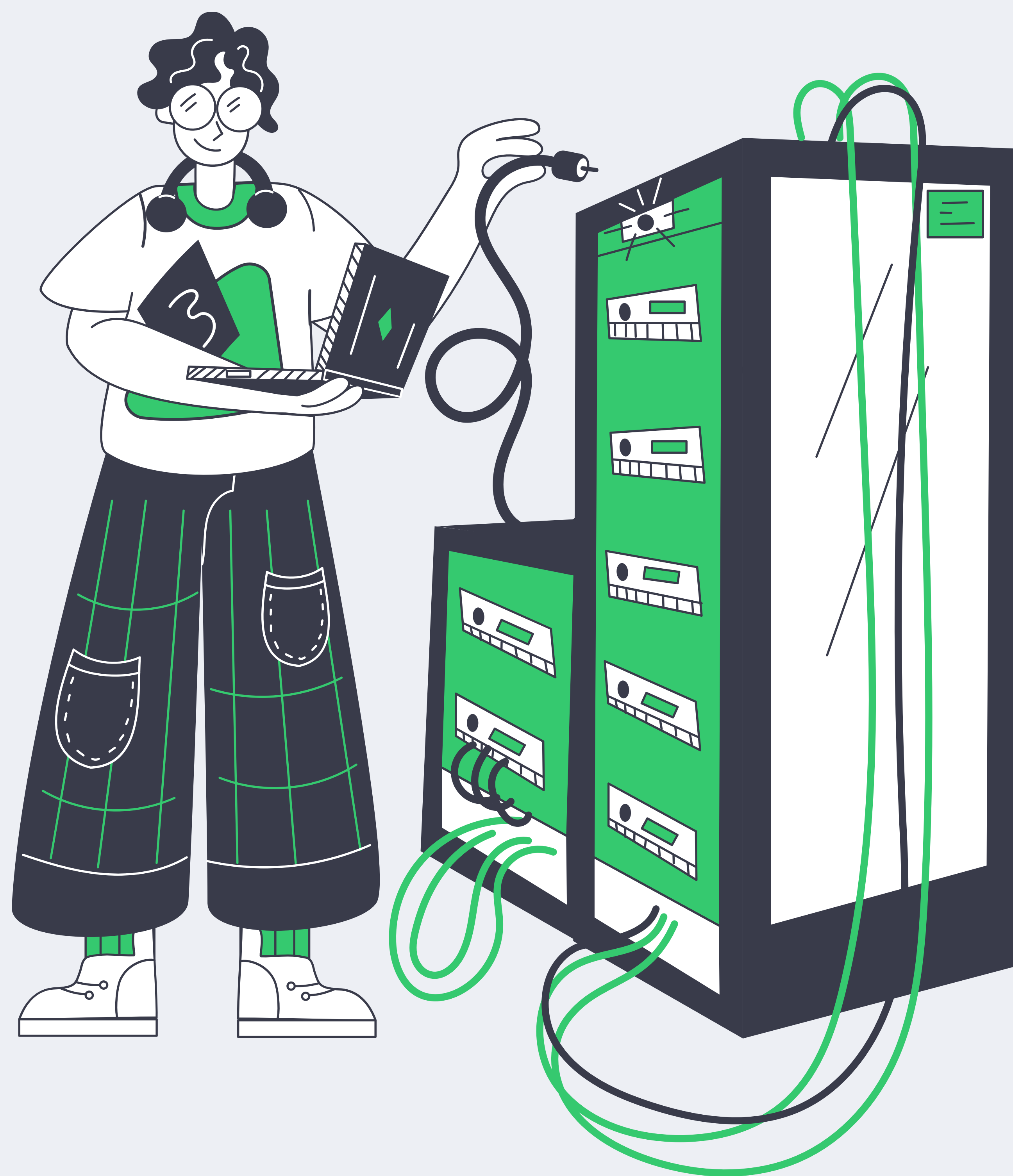
Imagine this: you've got your own private workspace. No sharing resources, no frustrations of a shared office. Instead, you have the freedom to tailor everything to your exact requirements—pretty empowering, right? Now, let's dive deeper into how dedicated servers can help businesses like yours.



Explore performance-driven dedicated servers from trusted industry-leading vendors, designed for maximum reliability and cost efficiency. Discover why businesses worldwide trust Melbicom to keep them ahead.

Rent your dedicated server





Dedicated Servers vs. Physical Servers & Why Choose Data Center-Hosted Servers

Dedicated Servers vs. Physical Servers

Dedicated servers and physical servers often get lumped together, and it's easy to see why. At first glance, they seem identical: powerful machines sitting in sleek racks, designed to handle demanding tasks. But there's more beneath the surface, and understanding the distinction can make all the difference for your business.

Let's cut through the confusion. A physical server is exactly what it sounds like—hardware. Think of it as owning a private business jet. Sure, it's impressive, but you'll need to handle everything from fuel and maintenance to pilot training and hangar space. It's an asset, but one that demands constant attention and resources to function effectively.

In contrast, a dedicated server is more like leasing a fully managed jet service. You get the same high-performance hardware, but with an experienced team handling the logistics. The hosting provider ensures the server is always powered, connected, secured, and ready to go. They also take care of maintenance, leaving you free to focus on your goals.

Let's break down how dedicated servers transform raw hardware into practical solutions.

Why Choose Data Center-Hosted Servers

When it comes to hosting digital services—whether it's websites, applications, CRM systems, etc.—the decision on where to house your servers is one of the most critical.

For some large enterprises, the answer lies in building their own data centers or leasing private spaces within professional facilities. This approach grants full control but demands considerable investment in resources and expertise. On the other hand, most businesses face a simpler choice: hosting servers on-premises or opting for dedicated servers managed in professional data centers. Each option comes with unique considerations that deserve closer scrutiny.

Here, we'll move beyond surface-level comparisons to explore the specific challenges of self-hosting and the clear advantages offered by professional data centers. From enhanced security to operational efficiency, let's unpack how a dedicated server hosted in a professional environment can redefine reliability and scalability for your business.

Enhanced Security

Let's face it—security is non-negotiable in safeguarding critical IT resources. [Top-tier data centers](#), like Tier III and Tier IV, don't just meet the standard; they redefine it. Think of them as digital fortresses where physical security and access control are meticulously crafted to eliminate vulnerabilities. These facilities go far beyond the basic measures you might find in typical office environments, offering a comprehensive, multilayered approach to protecting what matters most.

Layers of Defense

Picture a security system built like an onion—layer upon layer, each more stringent than the last. In Tier III and IV data centers, the "shell" concept transforms the facility into a fortress. The building's outer perimeter, checkpoints, hallways, and server rooms form distinct barriers, each requiring separate clearance. Unlike an office setup, where a single locked door might be the only safeguard, these centers demand progressive authentication. From turnstiles and biometric scans to mantraps that prevent tailgating, every step is designed to detect unauthorized access.

24/7 Monitoring and Trained Personnel

Security in these data centers doesn't clock out. Around-the-clock monitoring ensures that potential threats are addressed immediately. Dedicated security teams are always on-site, ready to respond at a moment's notice. Additionally, many facilities employ on-call experts to handle emergencies without delay. Contrast this with typical office setups, where security often operates only during business hours—leaving critical infrastructure vulnerable when it matters most.

Sophisticated Technology

Technology takes center stage in these data centers. Comprehensive CCTV coverage captures every angle, while motion detectors, RFID cards, and biometric scanners ensure that every movement is monitored. Even access to individual server racks is tightly controlled, with logs tracking every technician and visitor. In comparison, many office environments rely on minimal security—perhaps a few cameras and a simple keycard system. Tier III and IV facilities raise the bar, leaving no room for error when it comes to protecting your infrastructure.

Strict Protocols and Certifications

Operating a Tier III or IV data center requires meeting some of the most rigorous international standards. These certifications cover not only cutting-edge technology but also physical resilience and procedural excellence. Every movement within the facility is carefully choreographed to minimize risk. In office settings, where security protocols are often informal at best, such measures are practically unheard of.

Reduced Downtime

To ensure your operations stay online, **Tier III and Tier IV data centers** set the gold standard for reliability, far surpassing office setups vulnerable to power outages and internet disruptions. With redundancy built into power systems, network connections, and maintenance processes, they minimize downtime through meticulous planning. Unlike office-based setups, these facilities ensure uninterrupted operations, allowing businesses to focus on growth. Let's dive into what makes their reliability unmatched.

Infrastructure Built on Redundancy

Imagine a safety net where every critical system—from power to cooling—has a backup ready to step in instantly. That's exactly how Tier III and IV data centers operate. They promise uptime levels of 99.98% and 99.995%, respectively, thanks to their redundant designs. Compare this to a standard office setup, where a single power outage or internet hiccup can bring everything to a screeching halt. It's clear why these facilities stand out from the rest.

Multiple-Route Internet Connections

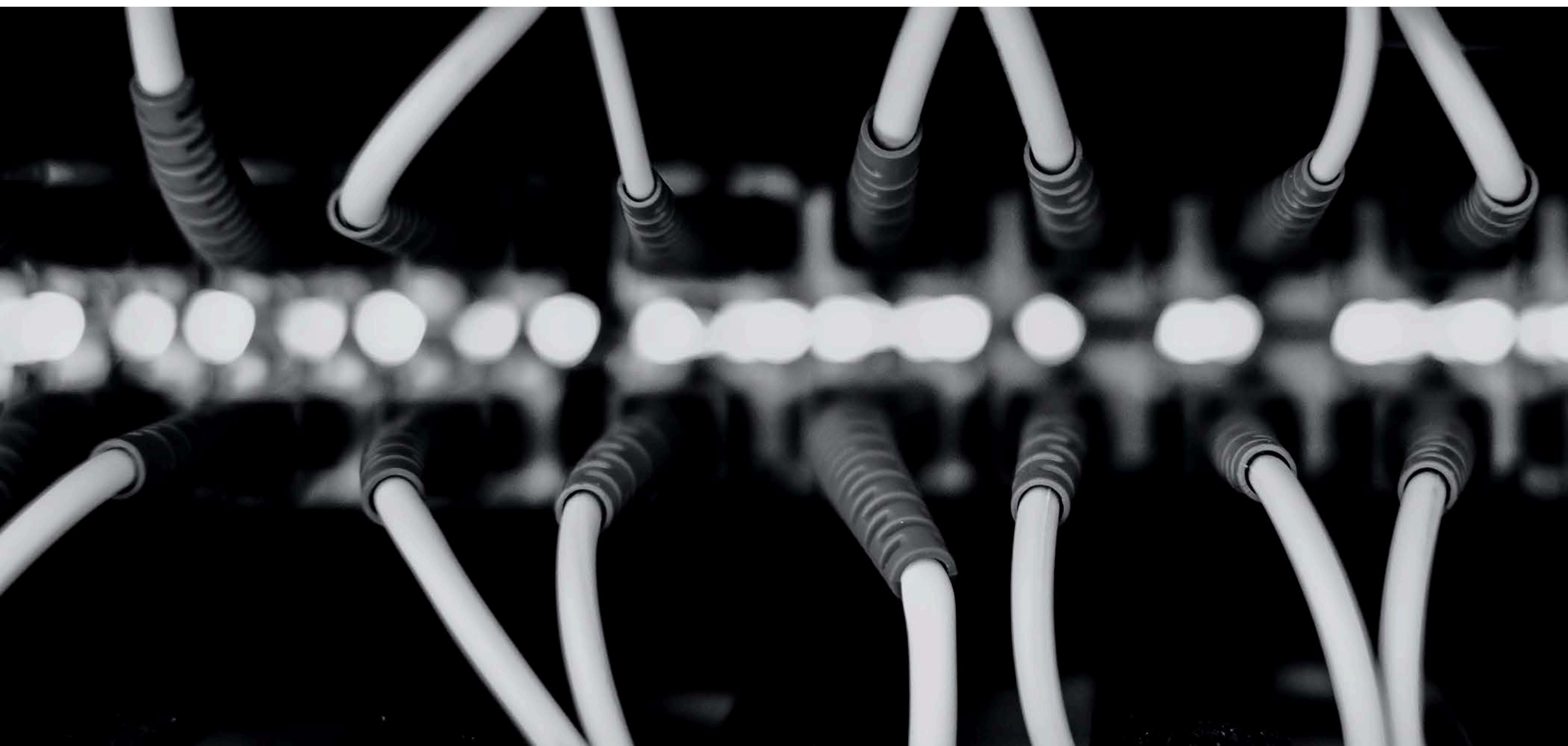
Connectivity is critical, and Tier III and IV data centers take it seriously. By leveraging a multi-homing model with multiple independent providers, they ensure that if one connection goes down, traffic automatically shifts to another route. In most offices, however, a single internet provider is the norm, leaving them exposed to significant downtime when issues arise.

Independent Power Feeds and Backups

Power disruptions? Not an issue here. These data centers use at least two independent power feeds, ensuring a seamless transition if one fails. Add in uninterrupted power supply (UPS) systems and diesel generators, and you've got a fortress of uninterrupted energy. Contrast that with the typical office, where a small UPS might keep things going for a few minutes at best, and the difference is staggering.

Seamless Maintenance

One of the most impressive features of these high-tier data centers is their ability to perform updates and maintenance with minimal impact on operations. Repairs and upgrades can be carried out with little to no downtime—a stark contrast to office environments, where even small adjustments often require extended downtime and disrupt workflows.



Optimal Temperature and Humidity Levels, Advanced Dust Protection

Maintaining an optimal environment is a cornerstone of professional data center operations. These facilities aren't just clean—they're meticulously engineered to provide the perfect conditions for **high-performance servers**. Every element, from the air temperature to humidity levels, is fine-tuned to ensure servers operate at peak efficiency and enjoy a longer lifespan. Deviations, such as overheating or dryness, can lead to performance issues or premature hardware failure, making precision a top priority.

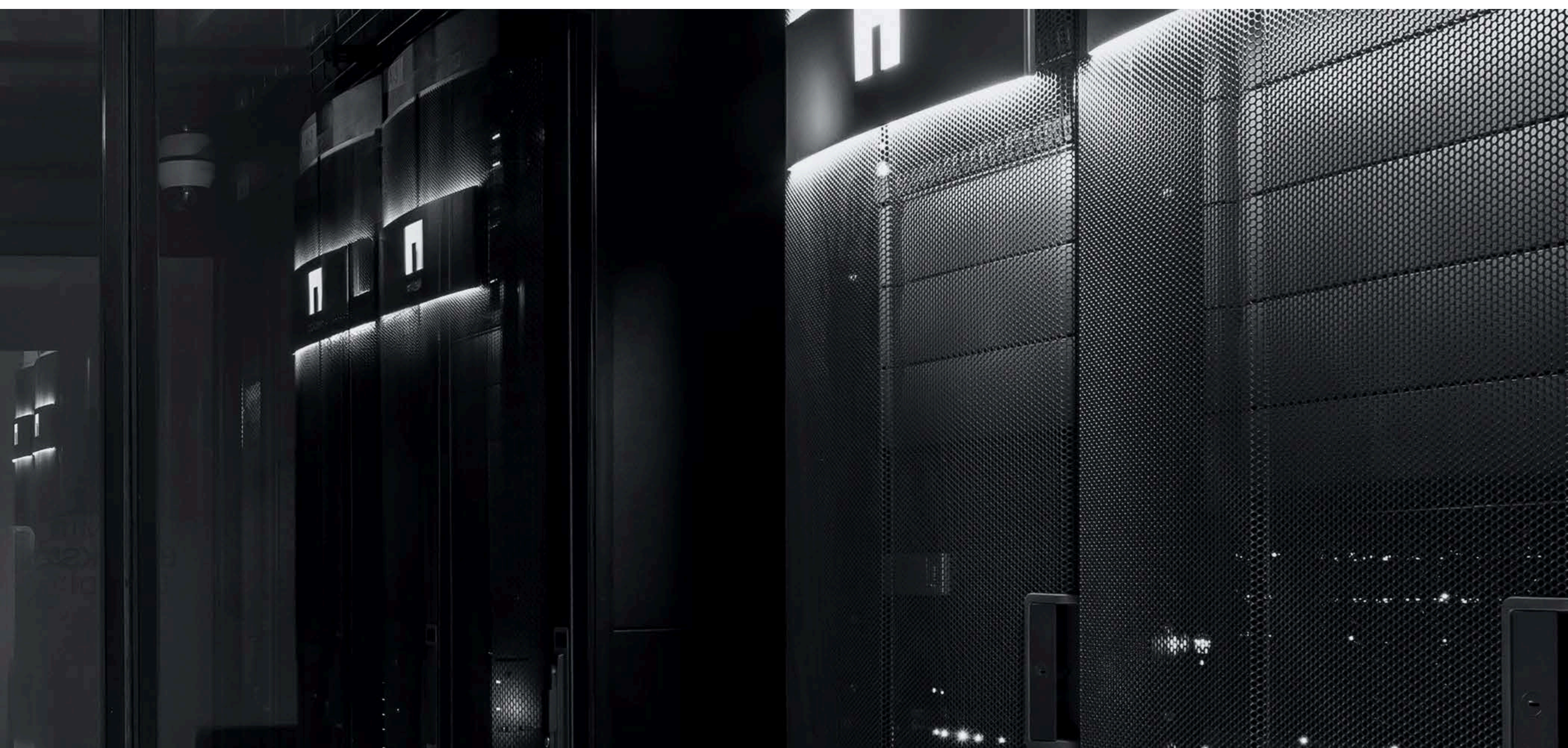
Industrial-grade cooling systems step up to ensure consistent conditions. These systems use advanced evaporators and precision controls to maintain an ideal balance, creating an environment where servers can operate at their best without the risk of overheating.

But it's not just about temperature and humidity—cleanliness plays a starring role. Dust, often overlooked in everyday environments, is a stealthy enemy of server performance. These tiny particles can infiltrate cooling systems, coat delicate components, and disrupt electrical contacts. Over time, they reduce fan efficiency, impair heat regulation, and increase the risk of short circuits or even fires.

Professional data centers address this threat head-on with proactive measures. Before the first server is installed, every surface is rigorously cleaned to eliminate dust. Multi-stage air filters are employed to capture microscopic particles, while engineered airflow systems prevent dust from circulating. Human access is another consideration; technicians and visitors follow strict protocols, including wearing protective coverings, to keep contaminants out.

Compare this to an office setting, where foot traffic, textiles, open windows, and even ventilation systems continuously introduce dust near servers. Cleaning in these environments often means powering down equipment, leading to downtime and operational risks. In contrast, data centers are designed to operate 24/7 without interruption. Their climate control systems, high-grade filters, and stringent cleanliness standards keep dust at bay, allowing servers to run reliably.

In these pristine conditions, servers are free to do what they're built for: delivering peak performance without the worry of overheating, inefficiency, or unexpected breakdowns.



Fire Safety Measures

Fire safety in modern offices—especially those with dedicated server rooms—frequently fails to receive the attention it deserves. A few fire extinguishers and a basic alarm system might seem adequate, but the reality is far more complex. Office infrastructure isn't typically designed to address the unique risks posed by high-density IT equipment. Without advanced suppression systems or fire-resistant construction materials, a fire can swiftly lead to hardware damage, operational disruptions, and potentially catastrophic data loss.

Data centers, however, take a completely different approach. These facilities use fire-resistant materials, protected cable routes, and layouts engineered to minimize risks like dust accumulation—a known fire hazard. Every element is meticulously planned to detect and contain fires at the earliest possible moment. When you're managing hundreds or thousands of servers, the stakes are simply too high to take shortcuts.

Let's talk about detection and suppression. Data centers deploy state-of-the-art systems like Very Early Smoke Detection Apparatus (VESDA), which can detect the faintest traces of smoke long before a fire ignites. This early warning gives ample time for intervention. If suppression is required, automated systems kick in, using specialized gases such as FM-200 or Halon 227. These agents extinguish fires without causing collateral damage to sensitive electronics—no water, no corrosion, no electrical shorts. In many cases, these systems can stop a fire in its tracks within seconds, keeping disruptions to a bare minimum.

Contrast this with an office environment. Retrofitting an office to include similar fire safety measures is not only expensive but also logistically complex. It might involve upgrading building materials, enhancing ventilation, and overhauling climate control systems—steps that are often impractical or cost-prohibitive. The result? Most offices simply can't match the fire protection standards of a professional data center.

For data centers, fire safety isn't just a "nice to have"—it's a necessity. Their role in managing mission-critical infrastructure and sensitive data demands nothing less. This is why the gap in fire protection between office setups and data centers is so stark. When it comes to safeguarding your hardware, data, and business continuity, data centers are in a league of their own.



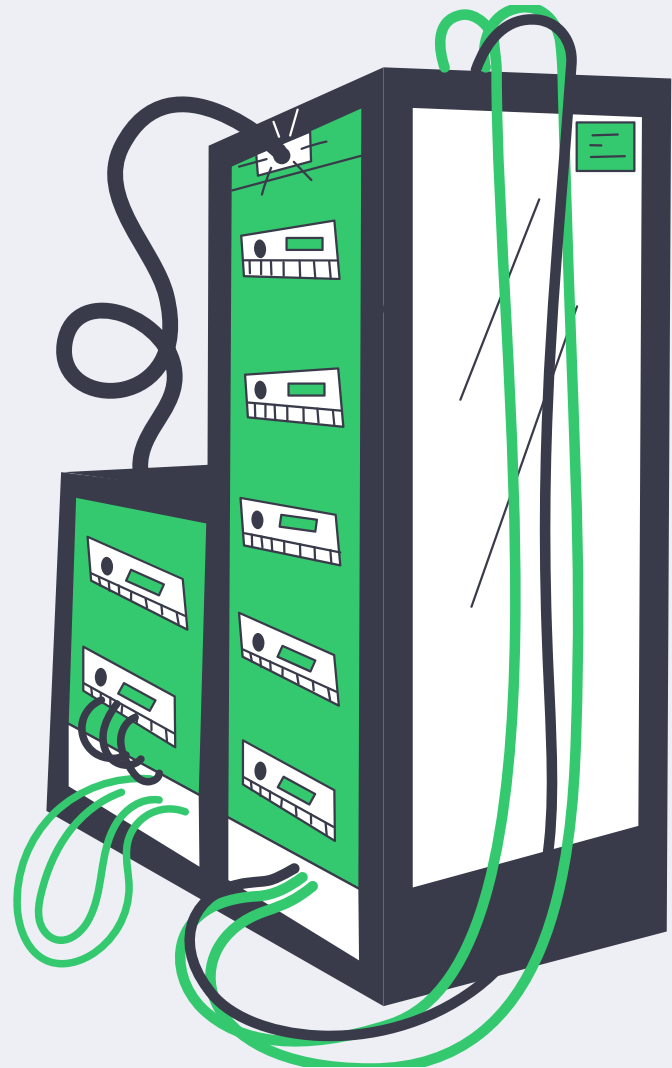
Professional Expertise and Support

In most office environments, server maintenance can feel like a constant juggling act for IT teams. Often, one or two system administrators are tasked with overseeing everything—managing power supply, monitoring temperature, upgrading hardware, troubleshooting network issues, and maintaining data storage. Sound overwhelming? That's because it is. Building a team of specialists to handle each responsibility might sound ideal, but it's rarely a cost-effective solution for most businesses.

Data centers operate on a completely different scale, with teams of dedicated professionals who specialize in distinct areas. You'll find experts in physical security and surveillance, engineers focused on server configuration and maintenance, and technicians managing advanced climate control systems. This ensures that every aspect of infrastructure management is handled efficiently, minimizing downtime and maximizing reliability.

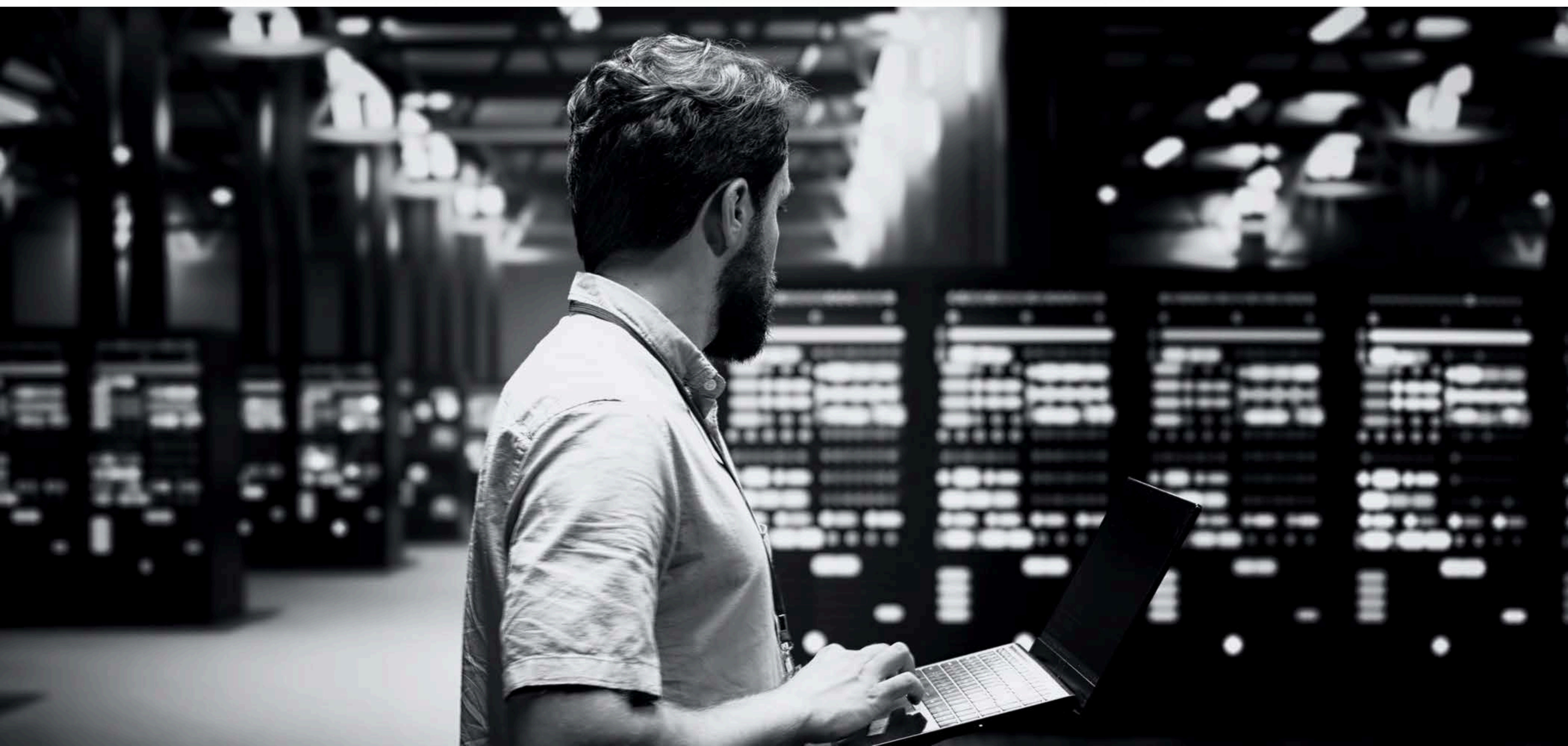
Now, let's talk about cost. The economies of scale offer an undeniable advantage. By centralizing resources, hosting providers drastically reduce the per-unit cost of maintaining equipment. Compare that to the expense of replicating a similar setup—and assembling the team to manage it—in an office environment, and it's clear why businesses rely on providers. Not only do you get access to expertise, but you also save on operational costs.

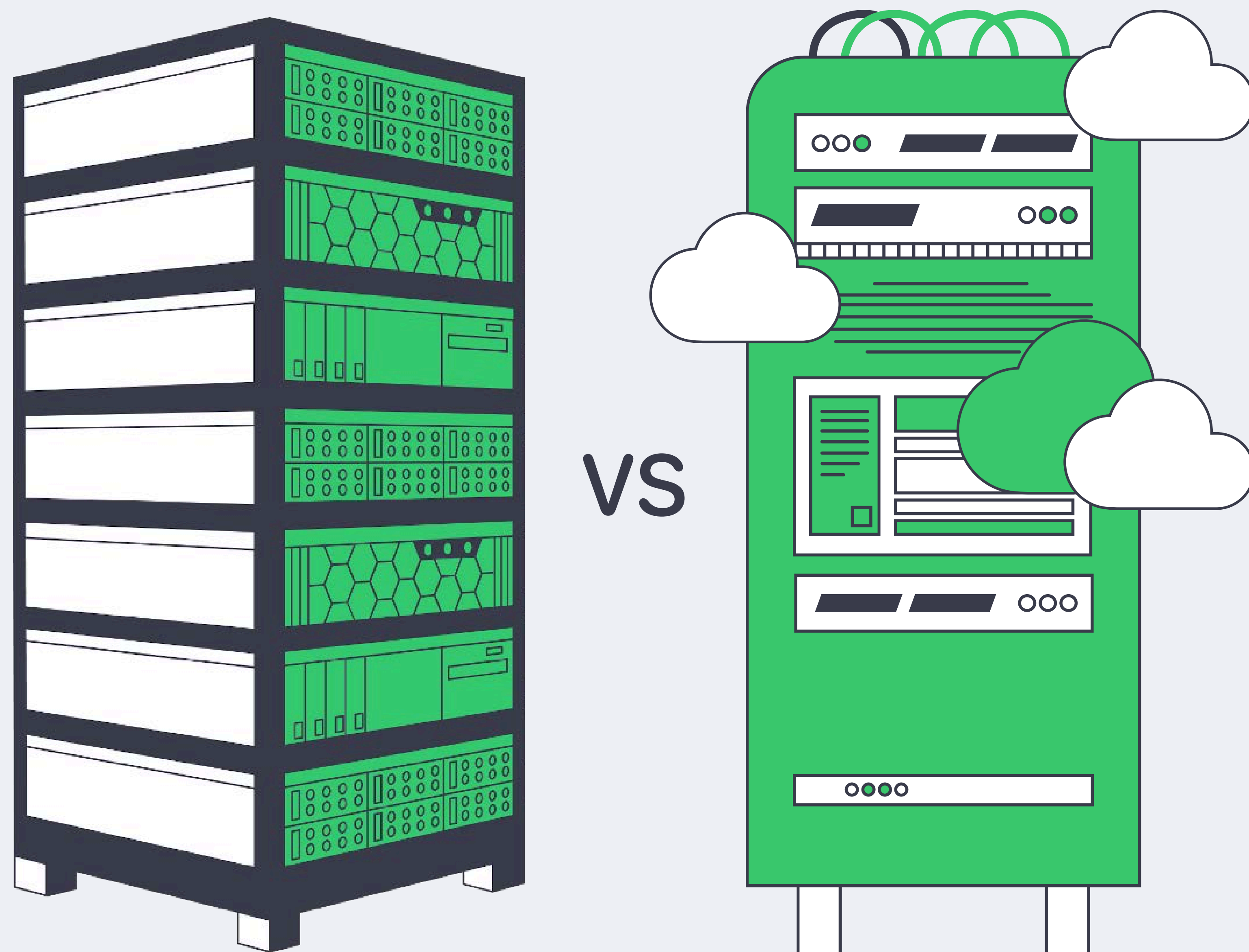
Take [Melbicom](#), for example. We elevate support to the next level with 24/7 engineering assistance. Whether you need advice, a quick fix, or component (re)installation, our engineers are always available. With KVM-over-IP hardware ready within 15 minutes, you can access your server console remotely whenever you need it. This partnership allows you to retain full control of your IT infrastructure while leaving the heavy lifting to professionals.



In the end, choosing a hosting provider over purchasing and maintaining servers independently is more than just outsourcing—it's about building a seamless partnership. With professionals managing the infrastructure, your team can focus on business growth.

[Select your dedicated server](#)





Dedicated Servers vs. VPS and When Choose Dedicated Servers

Dedicated Servers vs. VPS

When you rent a dedicated server, you're gaining access to an entire physical machine. This setup offers unparalleled control, flexibility, and isolation. However, it comes at a higher price point, making dedicated servers the go-to choice for large-scale, resource-intensive, or highly specialized projects. A VPS (Virtual Private Server), on the other hand, divides a single physical machine into multiple virtual environments shared among clients. This approach is more budget-friendly and flexible, making it a popular option for smaller or dynamically evolving workloads.

So, how do you decide? It often boils down to what's under the hood. Let's unpack two popular virtualization technologies that drive VPS performance.

OpenVZ is like the efficient multi-tasker of the server world. It shares a single kernel across all virtual environments on a physical server, which means it operates with minimal overhead. Pretty simple, right? Well, not quite. This design makes OpenVZ perfect for consistent workloads. Plus, upgrades are seamless and don't cause downtime—a definite win. But here's the catch: the shared kernel limits customization. You can't install a different OS or tweak kernel parameters significantly. If your needs go beyond its boundaries, OpenVZ might not be the right fit.

KVM, on the other hand, provides full hardware virtualization, effectively emulating a standalone physical machine. In Melbicom's infrastructure, KVM drives our [Cloud Servers](#), delivering capabilities that far surpass those of OpenVZ. With KVM, you can install custom VPN solutions like OpenVPN or PPTP, dive deep into network configurations, and manage sockets, processes, and kernel parameters. This level of flexibility makes KVM a standout choice for users who need more control over their environment.

But what if even the advanced capabilities of KVM aren't enough? When should you consider transitioning from a VPS to a dedicated server? Below, we'll delve into scenarios where dedicated servers shine. These examples span a range of use cases—from scalable data storage and continuous computational workloads to enhanced isolation and advanced DDoS protection. By understanding which tasks are best suited for dedicated servers, you'll be empowered to make an informed decision and build an infrastructure that aligns perfectly with your project's needs.

When Choose Dedicated Servers

Storing Large Amounts of Data

Picture this: your project has grown to the point where managing massive amounts of data has become a daily reality. Whether it's a backup repository, analyzing enormous log files, maintaining multimedia libraries, or archiving crucial records, the challenge of finding the right storage solution becomes unavoidable. While virtual private servers offer flexibility in configuration, their limitations in disk space—especially when your needs exceed a few hundred gigabytes and enter the realm of terabytes—can quickly become apparent.

Dedicated servers step up to the plate with hardware designed to handle such challenges. They can house multiple physical hard drives or SSDs configured in RAID arrays to boost reliability and performance. For instance, for a price comparable to high-end VPS plans, you could opt for a server with a pair of terabyte-sized SATA drives or ultra-fast SSDs. This setup not only provides vast storage but also ensures data safety through redundancy. And if standard configurations don't fit the bill, custom setups allow you to expand storage capacity or enhance disk speeds.

The scalability factor further tilts the balance in favor of dedicated servers. As your business grows, so too do your data requirements. With a dedicated server, you can easily add storage, upgrade to faster processors for improved data processing, or migrate to a more robust machine. Need higher network throughput or additional storage operators? Dedicated servers provide unparalleled flexibility for tailoring your setup to match your evolving needs.

Managing Extensive Data Workloads

When tackling resource-intensive computational tasks like large-scale data analysis or processing complex mathematical models, CPU performance becomes the star of the show. On a VPS, these heavy workloads can hit a wall. Overloading the CPU risks affecting the “neighbors” sharing the same physical machine. To prevent disruptions, some hosting providers enforce strict policies on resource usage to maintain stability across projects.

Other providers offer more expansive VPS plans with "Dedicated CPU" tiers or packages that guarantee resources—allowing full use of one or more CPU cores. These solutions are ideal for handling intermittent or periodic computational surges. If your project requires heavy lifting only occasionally, the benefits of such cloud-based options are clear: activate a VPS when needed and pause it during downtime to cut costs.



But what if your project demands relentless CPU usage, running round the clock to process vast datasets, transcode video in real-time, or execute complex scientific computations? In such cases, a dedicated server emerges as the ultimate solution. It grants exclusive access to the full computational power of the machine, freeing you from the constraints of shared resources. With a Dedicated Server, you won't encounter provider-imposed CPU usage limits, nor will you need to worry about neighboring workloads impacting performance—because there are no neighbors.

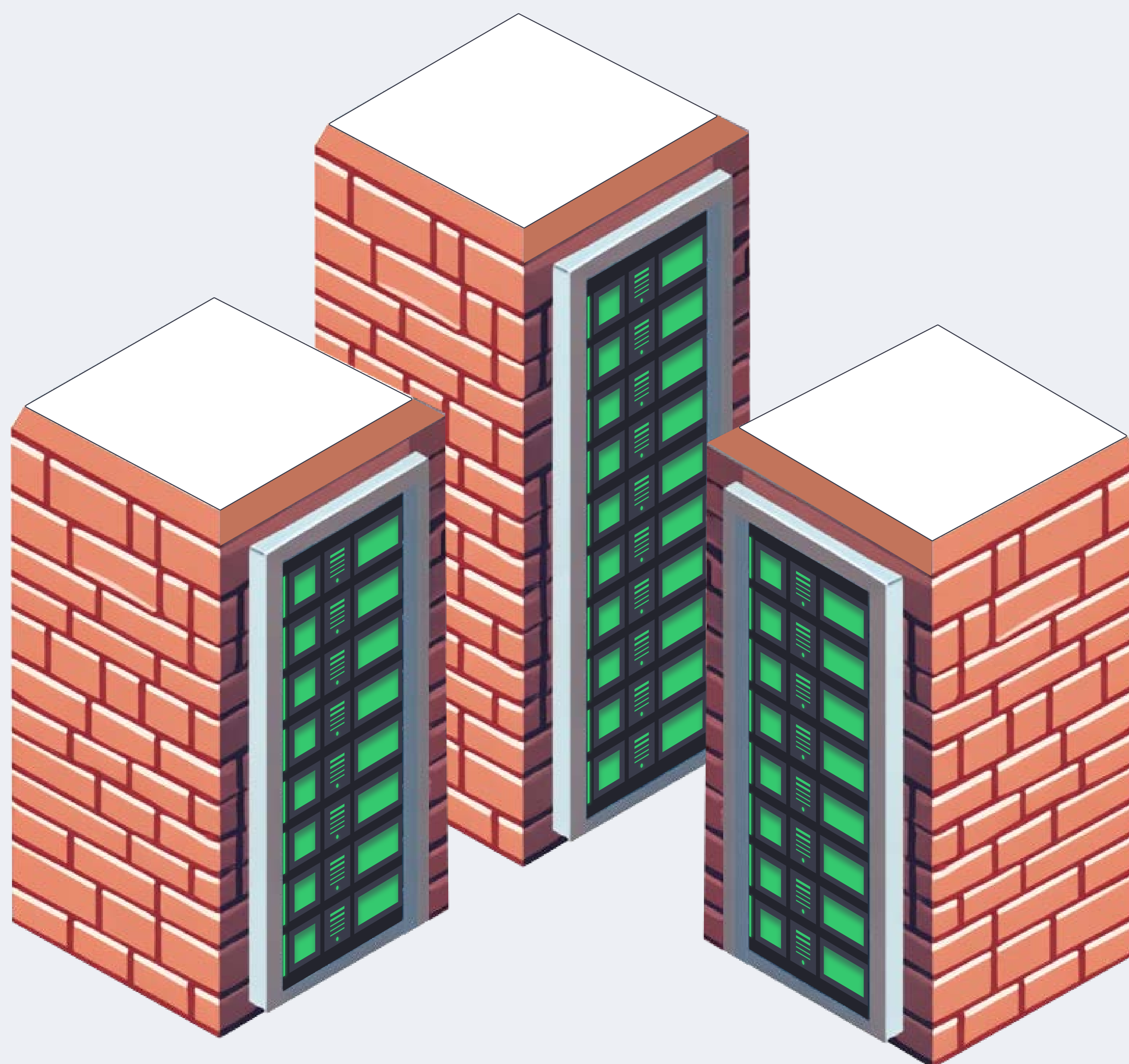
Beyond just raw power, dedicated servers offer unparalleled flexibility. Need to fine-tune the cooling system, swap out processors, or add new components as workloads grow? It's all possible. You can scale up or out by increasing the number of cores, boosting clock speeds, or upgrading to more powerful processors tailored to specific tasks. For sustained heavy workloads, a dedicated server provides unmatched reliability and adaptability.

Running Memory-Intensive Applications

For certain projects, RAM—that indispensable workhorse of computing—becomes the defining factor. Whether you're running memory-intensive applications, processing vast datasets in real time, or juggling numerous parallel tasks, the amount of RAM at your disposal can make or break your operations. If your project involves in-memory databases, on-the-fly data analysis, complex simulations, or high-traffic web applications, then choosing between a VPS and a dedicated server may hinge entirely on memory capacity.

Modern VPS plans, especially those in cloud environments, offer surprisingly robust configurations—sometimes as high as 32 GB of RAM or more. For many use cases, this is more than sufficient. If your project is in its early stages or doesn't demand monumental resources, a VPS can be an excellent starting point. Scaling is straightforward: if you need more memory, you can quickly upgrade without missing a beat. Plus, some providers allow you to pause or adjust your VPS configuration on the fly, adding a layer of convenience.

But what if your needs exceed these limits? For projects requiring 64 GB, 128 GB, or even 768 GB of RAM and beyond, the choice is clear: **dedicated servers are the way to go**. With a dedicated server, you unlock virtually unlimited opportunities to scale your memory. You can tailor the components to meet your specific needs, creating an ideal balance of CPU, RAM, and storage for maximum performance. And if your project is poised for further growth, expanding physical hardware is a breeze. You can add more memory modules or replace existing ones with higher-capacity options—all without being confined to predefined templates.



Enhanced Workload Isolation

Infrastructure for demanding projects often hinges on one critical requirement: ironclad workload isolation. This principle transcends mere data security and privacy; it ensures that your operations stay unaffected by others' activities—and vice versa. While VPS and modern virtualization solutions provide software-based isolation, effectively creating "sandboxes" with allocated resources for each virtual server, there's still a single physical machine in use. Under certain conditions, this shared nature can evolve into a bottleneck.



A dedicated server offers something virtualization simply can't: true hardware-level isolation. You gain full control of an entire physical machine, with resources that are exclusively yours. This eliminates any risk of interference from "neighboring" workloads that might cause unpredictable behavior, increased latency, or bandwidth throttling. On a dedicated server, you also have the freedom to fine-tune configurations, install software, customize drivers, or optimize the operating system kernel without worrying about impacting other users or hitting provider-imposed limits.

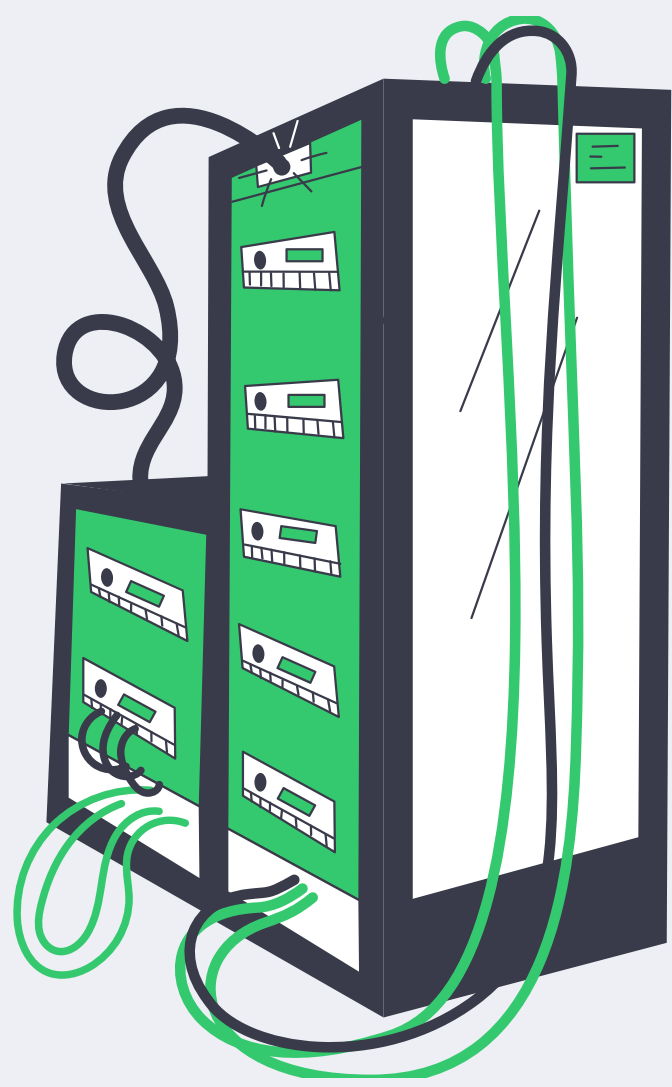
A stylized illustration featuring a green, curved, shoe-like object with a white sole, positioned next to a black server rack. The server rack contains several green circuitry components. Floating around the shoe-like object are several 3D symbols: a number 4, a number 5, a number 1, a number 0, an asterisk, and a hash symbol. The entire scene is set against a light gray background.

In today's cyber reality, DDoS attacks have become an all-too-common threat to internet projects of every scale. These powerful network assaults can grind access to web applications, online services, or corporate systems to a halt, leaving reputations and financial results in tatters. That's why robust DDoS protection isn't a luxury; it's a foundational pillar of any infrastructure—whether for VPS or dedicated servers.

Enter **Melbicom's Clearflow DDoS Shield**. This hybrid hardware-software solution, available for both VPS and dedicated servers, uses a combination of geo-distributed filters and advanced algorithms to analyze incoming traffic. Its capabilities include detecting anomalies and recognizing known attack types, ranging from straightforward ICMP floods to sophisticated TCP SYN floods or malformed IP packets. Here's the kicker: traffic filtration during attacks doesn't incur additional charges, and bandwidth remains guaranteed.

But when it comes to dedicated servers, the game changes—bringing with it a new level of control and flexibility. Imagine having the ability to deploy hardware firewalls, configure custom routers, set up intrusion detection and prevention systems (IDS/IPS), or integrate additional filtering devices. On a dedicated server, you have full access to low-level network settings, allowing you to implement tailored solutions, write custom scripts, and create routing rules that fit your project like a glove. Beyond the Clearflow protection, you can build a multi-layered security architecture designed to tackle your specific needs.

If your mission is to stand strong against complex, multi-vector attacks, a dedicated server offers the freedom and tools that shared resources simply can't match. While VPS users still benefit from Clearflow DDoS Shield and can configure protection policies, physical limitations impose certain boundaries. Dedicated servers, on the other hand, unlock greater possibilities for scaling security measures, optimizing routes, and integrating proprietary monitoring tools—all of which provide that extra layer of confidence in your project's stability and reliability.



For many use cases, a virtual private server is more than sufficient. However, when it comes to scalability, a dedicated server offers the most reliable, functional, and future-proof solution for projects requiring resources far beyond standard virtual plans.

Select your dedicated server



The Same Dedicated Server, but a Different Client Experience

When we talk about **dedicated servers**, the term brings to mind a simple concept: you're handed the keys to a high-performance physical server, with all its resources exclusively yours to harness. But behind this simple definition lies an entire universe of options to service delivery. From a client's perspective, the market can be loosely divided into two major categories.

The first group consists of providers who offer a bare service: here's your server, here's your access—everything else is up to you. The second group, on the other hand, strives to ease the client's burden. These providers focus on removing the headaches associated with server administration, offering help with configuration, network settings, security, and ensuring stability.

On the surface, both options fall under the same banner: "dedicated server." But dig a little deeper, and you'll find two vastly different experiences tailored to distinct needs. Imagine renting a car. One company hands you the keys and says, "Off you go." Another not only prepares the car for your trip but also provides a chauffeur, fuel, regular maintenance, and on-the-road support. Both are technically "car rentals," but the level of comfort, risk, time investment, and stress involved couldn't be more different.

Unmanaged Dedicated Servers: Maximum Freedom, Maximum Responsibility

Let's consider the first scenario—where the provider offers a "bare-bones" server. In this case, you receive a physical machine with the specifications you've chosen: processor, RAM, disks, and network ports. You also get basic access to the server—typically via SSH or a console interface. And that's it. From here on, everything else is up to you.

What does this mean in practice? You'll need to handle the following:

Installing and configuring the operating system:

Decide which OS to install, how to update it, which components to add, and how to set up security properly.

Monitoring updates and security: Constantly track system status, apply patches, update software, and monitor for vulnerabilities. This determines whether your server stays secure or becomes a target for unauthorized access.

Managing DDoS protection and other threats:

Without external help, responding to attacks can be tricky. You'll need the tools to react effectively.

Deploying software: Web servers, databases, mail services, FTP, control panels—you will need to install, configure, and test everything for compatibility and security.

Troubleshooting performance and availability issues: If your website slows down, your database lags, or services crash, you'll need to diagnose and resolve the root causes yourself.

Configuring network settings: If you need to set up a BGP session, announce IPs, or create VLANs, these tasks fall squarely in your domain.

This approach is ideal for businesses with a robust internal IT team. If you have experienced system administrators, network engineers, and security experts, this "bare-bones" option lets you customize your server to your needs without paying for additional services. You have complete control over every aspect, and nothing limits your decisions.

But the price for this freedom is time and resources. You'll need to invest human hours (and money) into maintaining the system. If you're not prepared for this or lack the necessary skills, the risk of encountering downtime, problems, or even data loss rises significantly.



Unmanaged Dedicated Servers: Maximum Freedom, Maximum Responsibility

Now, let's shift to the second scenario—where the provider doesn't just hand you a server but extends a helping hand throughout the entire process.

At **Melbicom**, we believe in putting you at the center of everything we do. A dedicated server is not just a piece of hardware; it's a launchpad for your project's success. By taking the technical burden off your shoulders, we free you up to focus on growing your business, creating content, and delivering outstanding services. Rather than just providing hardware, we offer an all-encompassing solution that combines configuration and support with your dedicated server.

Here's what you get when you work with us:

Help in choosing the optimal configuration: You don't have to figure out which processor or how much RAM you need. Our experts will assess your project's requirements and recommend a server that delivers the necessary performance.

Round-the-clock monitoring and maintenance: Our specialists monitor server and network health 24/7, replace faulty components swiftly, and assist with troubleshooting. You can rely on our team's support at any time of day.

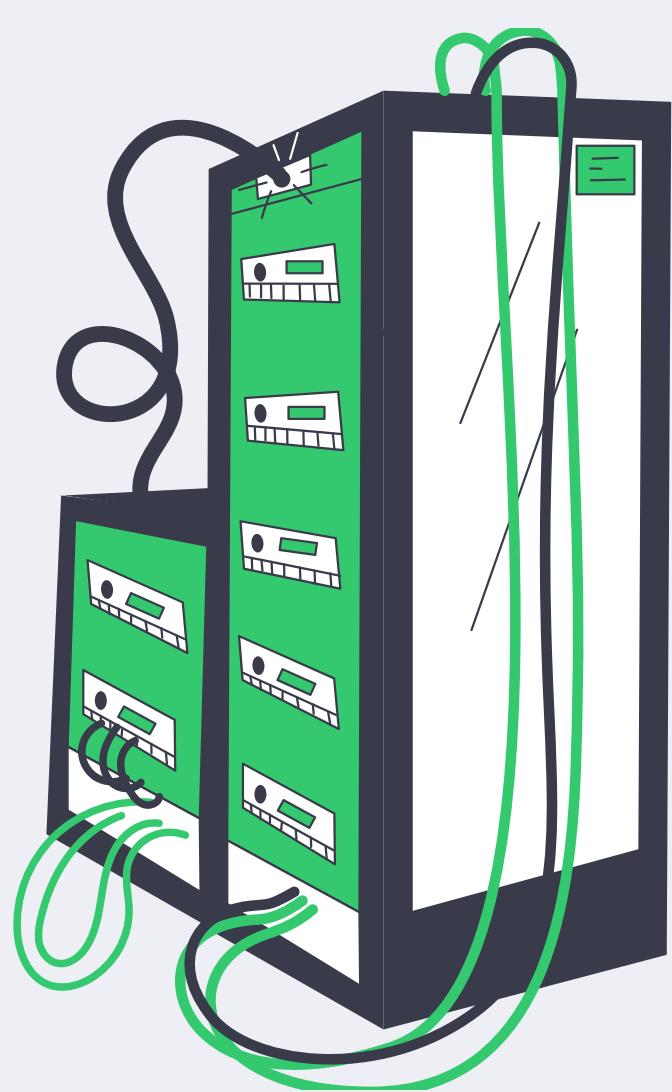
DDoS protection and security: We actively safeguard against DDoS attacks to protect your project. From updates and vulnerability checks to regular security audits, our team ensures your infrastructure stays secure.

Network setup and integration: Need to establish a BGP session, announce IPs, or set up VLANs between your servers? We handle this for you. Instead of diving into protocols and settings, you get results without the hassle.

Administration and software assistance: Need help installing or configuring an OS? Struggling with setting up a web server, database, or mail service? We'll do it for you, saving you hours—if not days—of trial and error.

Transparent pricing and monthly payments: No hidden fees for every action. You'll know exactly what's included in the cost and avoid unexpected charges. This allows you to plan your budget, knowing that support is part of the deal.

By partnering with us, you can focus on scaling your business—not on juggling technical challenges. We handle the aspects that drain time for many companies. In the end, you're not just getting a dedicated server—you're gaining a comprehensive infrastructure platform with service support. This is especially valuable for those without a full-fledged IT staff or who prefer to redirect their team's efforts to more strategic goals.



A dedicated server isn't just a service; it's an ecosystem of possibilities. The choice is yours: take on everything yourself or trust those ready to help. If simplicity, reliability, and 24/7 support matter to you, Melbicom is your optimal partner on this journey.

Select your dedicated server



Matching Server Specifications to Business Applications

In the vast digital ecosystem, no two businesses share identical server requirements. A startup building a sleek ecommerce platform has vastly different needs compared to a global analytics firm crunching petabytes of data. This is where dedicated servers redefine flexibility, providing bespoke configurations to address precise business demands. But how do you align server specs with the objectives of your unique operation? That's the crux of what we'll explore in this section.

Whether you're hosting a sprawling media site requiring low-latency performance or building a scalable data warehouse for secure and accessible storage, dedicated servers can bridge the gap between ambition and infrastructure. By aligning server capabilities with specific business applications, organizations can unlock not just efficiency, but also reliability and scalability, transforming IT infrastructure into a competitive advantage.

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Dedicated Servers for VPS and Web Hosting

Organizing a web hosting business today is a bold move—competition is intense, and success demands both a solid client acquisition strategy and a reliable infrastructure. This is why trying to organize web hosting or even VPS hosting on top of other VPS is like subletting your rented apartment room by room without notifying the landlord or signing proper contracts—technically possible, but rife with unpredictability, security risks, and performance issues.

Dedicated servers, on the other hand, are like owning your own property. You control everything—from the setup to the security—without worrying about sudden disruptions. In a competitive hosting market, uptime and speed aren't just perks; they're the foundation of customer satisfaction. That's where dedicated servers excel, providing the stability needed to deliver reliable services that shared or VPS hosting setups, built on top of other VPS, simply can't match.

Without Dedicated Servers

For hosting providers aiming to deliver quality services to clients, relying on shared infrastructure presents significant challenges:

- **Resource Contention:** In shared environments, CPU, RAM, and bandwidth are divided among multiple clients. As a hosting provider, you'll likely need to oversell these resources to stay profitable. However, the real challenge lies in the infrastructure you're renting—it's often already oversold, and you have no clear way to gauge the extent of this overselling. This creates a domino effect: unpredictable resource availability, slow response times, or even server crashes during peak traffic. These issues can quickly degrade service quality, leaving clients frustrated and impacting your revenue.



- **Client Acquisition Challenges:** Any hosting provider knows that the main challenge in this business is acquiring new customers. The competition is fierce, and the cost of clicks on advertising platforms is among the highest in the IT industry. This means you are spending hundreds of dollars to attract new clients, which can only pay off if the Customer Lifetime Value (CLV) covers these acquisition costs. However, at the most crucial stage—when potential clients are evaluating your service—you end up losing them due to inadequate infrastructure. By trying to save on costs with shared environments, you end up losing money.

With Dedicated Servers

By providing exclusive access to CPU, RAM, and bandwidth, dedicated servers give you full control over resource distribution, ensuring better performance and reliability for your clients. This means faster load times, fewer crashes, and a stable experience—crucial for retaining clients and improving overall satisfaction.

Client acquisition thrives on robust infrastructure, and dedicated servers can significantly enhance the return on marketing investment. After investing heavily in attracting new customers, unreliable infrastructure can undermine efforts and lead to lost opportunities during critical evaluation stages. Dedicated servers provide the reliability necessary to ensure a stellar first impression, paving the way for converting prospects into loyal clients.

Scalability is also straightforward with dedicated servers. As your client base grows, you can add more resources—such as CPU cores, RAM, or storage—with minimal disruption. This allows you to meet demands seamlessly and maintain service quality. Additionally, security is significantly enhanced, as dedicated servers enable the implementation of custom firewalls, access controls, and tailored security measures. This ensures compliance with industry standards and reassures clients that their data is safe and well-protected.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon
RAM	Minimum of 128 GB to support multiple security applications
Storage	SSDs or SSDs NVMe for the OS, with additional HDDs for backup
Bandwidth	High bandwidth with guaranteed connectivity

To keep your shared and VPS hosting smooth and reliable, Melbicom's dedicated servers are the answer. They're all about performance, flexibility, and security—optimized just for you. With data centers around the globe and 24/7 support, Melbicom's got your back. Ready to step up your hosting game? Learn more at [Melbicom's Dedicated Server Service](#).



Dedicated Servers for Ecommerce Websites

Running an ecommerce site today is like managing a brick-and-mortar shop during a holiday rush—customers pouring in, flash sales creating a frenzy, and expectations skyrocketing. It's fast-paced, it's demanding, and there's no room for error. If your website doesn't deliver blazing speed and rock-solid reliability, customers will abandon their carts and click over to your competitors without a second thought. Dedicated servers offer the performance, reliability, and speed your business demands—ensuring your site stays lightning-fast, handles surges effortlessly, and delivers a seamless experience that keeps customers coming back, no matter how chaotic it gets.

Without Dedicated Servers

Without a reliable infrastructure, an ecommerce site faces challenges that can seriously hurt your business.

- **Performance Issues:** On a shared server, other websites can use up CPU, RAM, or bandwidth, which slows down your e-store, especially during high-traffic events like flash sales. This can lead to slow page loads and a frustrating customer experience.
- **Security Risks:** On a shared server, vulnerabilities in neighboring sites can put your site at risk. Your customer data deserves strong protection, but shared hosting environments cannot guarantee the necessary level of security.
- **Scalability Constraints:** As your ecommerce business grows, you need the flexibility to scale up your resources. Shared servers limit your ability to expand when you need to, which can result in customers experiencing slow loading times during peak periods.



With Dedicated Servers

A dedicated server provides the resources your site needs to scale without limitations. Think of it as your private powerhouse: exclusive access to CPU, RAM, and storage means your site can handle traffic surges effortlessly. Whether it's Black Friday or an unexpected viral moment, your pages load fast, transactions run smoothly, and customers stay happy.

Security is another major win. With a dedicated server, you're in control of everything—from configuring firewalls to setting up advanced intrusion detection systems. This doesn't just give you peace of mind; it helps you meet strict compliance standards like PCI DSS and ensures your customers' data is always safe.

As your business grows, scaling up is simple. Dedicated servers give you the flexibility to upgrade your resources, keeping you ahead of the curve. Plus, thanks to [Melbicom's global network of data centers](#), you can place your servers closer to your customers, reducing latency and making their experience even better.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon
RAM	Minimum 64 GB for efficient processing
Storage	NVMe SSD for fast data read/write
Bandwidth	High bandwidth to handle peak traffic

Dedicated servers don't just keep your ecommerce business running—they make sure it thrives. They guarantee your site can handle traffic surges, safeguard customer data, and scale as you grow. And if you are ready to give your ecommerce business the infrastructure it deserves, [Melbicom's tailored dedicated server solutions](#) will support you with this.



Dedicated Servers for News, Media, and Other High-Traffic Websites

The growing demand for reliable infrastructure to support high-traffic, content-heavy websites has led media platforms to embrace dedicated server solutions. News portals, online magazines, and other media-rich websites can't afford downtime or sluggish performance. A single buffering screen or delayed page load could mean losing an audience to competitors who deliver a smoother experience. Dedicated servers are purpose-built for this—offering the reliability, speed, and power needed to handle increasing traffic volumes and ensure flawless content delivery.

Without Dedicated Servers

News, media, and other high-traffic platforms face several challenges without dedicated hosting infrastructure:

- **Resource Limitations and Scalability Issues:** Shared hosting or VPS solutions often suffer from resource contention during peak traffic, leading to slow load times, buffering, and potential site crashes. In addition, fluctuating availability of CPU, RAM, and bandwidth makes it difficult to scale as the site grows, especially as news archives continue to expand and the audience increases.
- **Sudden Traffic Spikes:** News events can happen unexpectedly, causing a surge in visitors searching for information online. Without dedicated resources, these sudden spikes in traffic can overwhelm shared setups, leading to downtime.
- **Security Risks:** Media platforms handle user data and generate content that may be prone to security threats such as DDoS attacks. Shared environments lack adequate security controls, making them vulnerable to breaches and compromising user trust.



With Dedicated Servers

Dedicated servers provide exclusive access to hardware resources, enabling media sites to effectively manage their infrastructure. By reserving all CPU, RAM, and bandwidth for your site, dedicated servers ensure faster content delivery, lower latency, and a consistently improved user experience, even during unexpected traffic surges. With ample power and guaranteed bandwidth, dedicated servers enable seamless scaling to accommodate growing audiences and expanding news archives without compromising performance.

Melbicom's dedicated servers provide advanced security features, including customizable firewalls and intrusion detection systems, ensuring robust protection against cyber threats. For global media platforms, Melbicom combines a distributed network of data centers with a [CDN spanning 36 countries across six continents](#). This integrated infrastructure minimizes latency, enhances scalability, and ensures reliable content delivery to users worldwide.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon, optimized for handling concurrent high-traffic operations
RAM	Minimum 128 GB to manage multiple simultaneous requests and ensure smooth media delivery
Storage	NVMe SSDs for fast read/write operations, crucial for delivering multimedia content seamlessly
Bandwidth	High-bandwidth connections (multi-gigabit) to accommodate large media files and high traffic

For media businesses looking to boost stability and performance, [Melbicom's dedicated servers](#) are the perfect fit. With a global network of strategically placed data centers and a powerful CDN, Melbicom keeps latency low and ensures your media content reaches audiences worldwide quickly and reliably.



Dedicated Servers for On-Premises and SaaS Application Hosting

For modern product teams and their DevOps workflows, microservices and containers have become the standard. But the real question is: what are the best hosting options for the job? What do on-premises, SaaS, and mobile app hosting servers really need to deliver?

If you're aiming for high performance and cutting app hosting server costs in the long run, dedicated servers are the way to go. They deliver reliability and speed—perfect for on-premises and cloud based application hosting. Unlike VPS environments, dedicated servers mean no shared CPU or bottlenecks. Just pure, raw performance and the freedom to customize everything to fit your business needs.

Without Dedicated Servers

Relying on VPS for hosting comes with some pretty big limitations that can seriously impact performance and control:

- **Resource Contention:** In shared VPS environments, CPU and memory are up for grabs, which means performance can take a hit during peak times. For product teams that need consistent resources to deliver a smooth UX, this can be a real headache.
- **Performance Issues:** Shared infrastructure doesn't always cut it for specialized web applications hosting. Fluctuating resource availability leads to latency and slower response times—not exactly what you want for user satisfaction or reliability.
- **Security Risks:** Keeping data safe and compliant in shared environments is tough, especially with the risk of cross-application security issues. Proprietary apps need high levels of isolation and control to protect sensitive data and intellectual property.



With Dedicated Servers

Dedicated servers take all those limitations and toss them out the window. With exclusive hardware resources, you get consistent, predictable performance every time. For product teams hosting their own applications, this means full control to customize the server environment to match performance needs—think low latency, high availability, and zero compromises. Plus, you can implement tailored security measures like custom firewalls and intrusion detection systems, adding an extra layer of protection.

App scalability? No problem. Dedicated servers make it easy to add more computational power or storage as your application grows, without worrying about downtime. Need even more flexibility? You can add nodes and organize a cluster to handle large-scale workloads or complex architectures. Whether it's managing seasonal traffic surges, supporting unpredictable growth, or planning for long-term scaling, your infrastructure keeps up, evolving right alongside your product.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon
RAM	Preferably 64 GB or more for better stability
Storage	NVMe SSD for fast read/write operations
Bandwidth	Minimum 1 Gbps, preferably 10 Gbps for high traffic
Data Centers	Choose providers with Tier III data centers; for SaaS, consider a diversified data center network to distribute load across PoPs and improve performance for users in various locations

Dedicated servers are a great hosting solution for product teams looking to host their web applications. They combine performance, security, and scalability in a way that just works. With Melbicom's Tier III - Tier IV data centers spread across the globe, you get not just **dedicated servers** but also the reliability and flexibility needed to scale confidently. For SaaS applications, their global network ensures efficient workload distribution, keeping everything running smoothly for users, no matter where they're located.



Dedicated Servers for AI and Machine Learning

AI and machine learning (ML) are driving innovation across industries, and the demand for powerful computational infrastructure has never been higher. Think about predictive analytics, natural language processing, or computer vision—they rely on processing massive datasets and running complex algorithms without a hitch. This isn't something just any server can handle. Fast data processing and guaranteed resource availability are non-negotiable, which is why dedicated servers are perfectly suited for AI and ML applications.

Without Dedicated Servers

Managing substantial data volumes for AI and ML training and inference is a well-known challenge. But another issue that often goes unnoticed is server infrastructure constraints—shared VPS resource use can create several challenges, especially during peak loads:

- **Resource Limitations:** AI models need considerable computing power and memory to perform efficiently, and shared environments such as VPS or cloud hosting can introduce unpredictable bottlenecks, slowing down AI training processes
- **Scalability Issues:** As AI projects grow, such as when a project expands to handle larger datasets or more complex algorithms, the need for more processing power and storage becomes critical. Shared environments limit this scalability.
- **Data Security Risks:** Sensitive data used in AI training is at risk in shared environments with multiple users, making security concerns paramount, especially in sectors like healthcare or finance where compliance is non-negotiable.



With Dedicated Servers

Dedicated servers offer exclusive access to hardware resources, ensuring that the server's CPU, GPU, RAM, and bandwidth are available without interference. For AI and ML, where high throughput and low latency are critical, dedicated servers with high-core-count CPUs and specialized GPUs can drastically cut training times and boost inference performance.

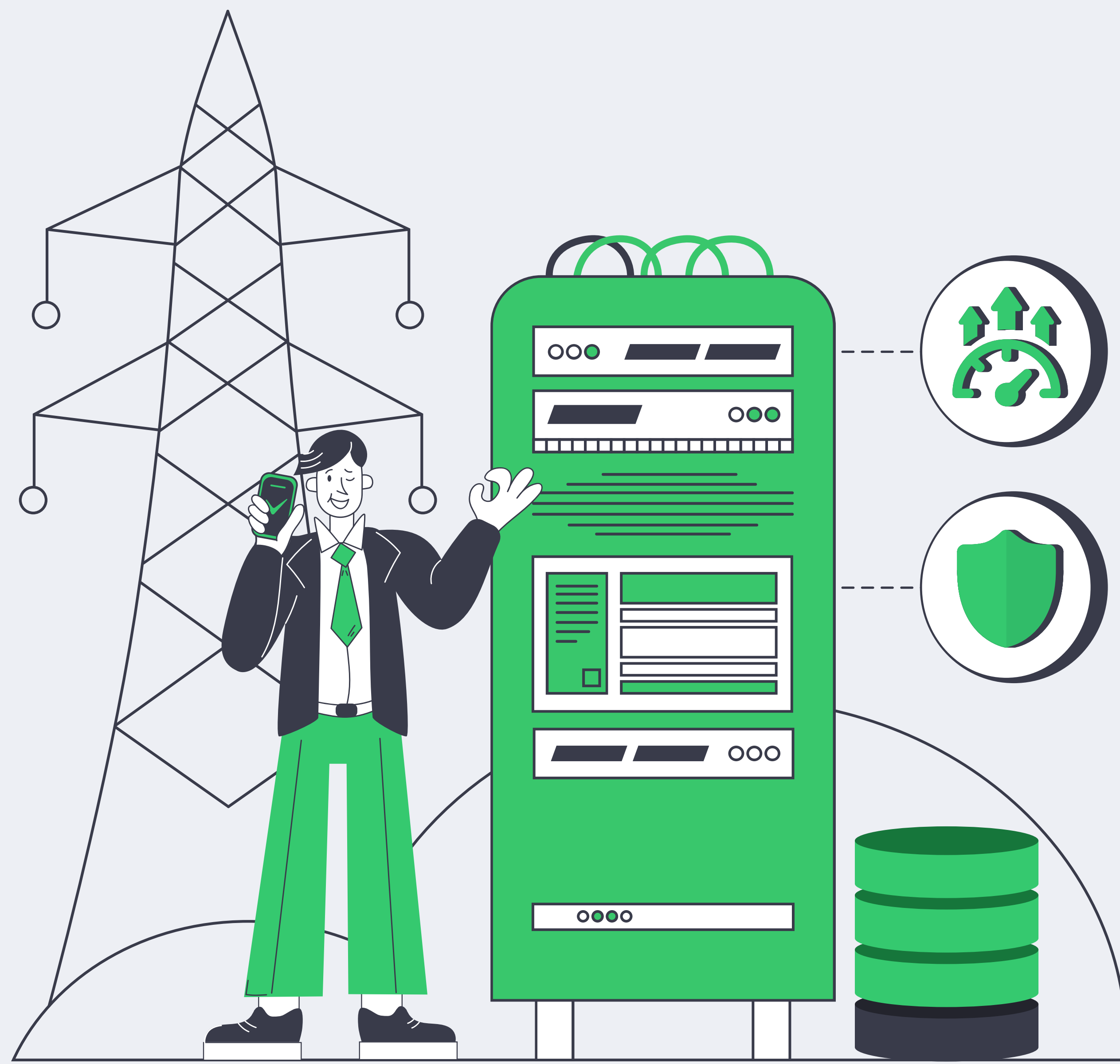
Scaling is another area where dedicated servers shine. Need more power? You can easily upgrade resources or rent additional nodes to a server cluster, ensuring your infrastructure grows with your business and keeps you competitive in a rapidly changing landscape.

Security is equally a standout benefit. With dedicated servers for machine learning, you get complete control to implement custom firewalls, intrusion detection, and access controls tailored to your needs. For industries like finance or healthcare, this level of security is essential for compliance with standards like PCI DSS or HIPAA.

Requirements

Component	Recommendation
CPU	Look for multi-core processors like Intel Xeon Platinum with 64 or more cores to handle parallel processing tasks effectively
GPU	Depending on the specific project, you may require renting a GPU server for your AI/ML needs, as deep learning tasks often benefit from specialized GPUs like NVIDIA Tesla to accelerate training times
RAM	Ensure sufficient RAM (starting at 128 GB) to handle large datasets efficiently
Storage	Use fast storage solutions like NVMe SSDs to manage large datasets efficiently

Dedicated servers are a top choice for businesses working with AI and ML, offering the power and flexibility needed to manage complex workloads. With Melbicom, you get best infrastructure built to handle these demands. While GPU servers for machine learning aren't currently available for renting, their **dedicated servers** are particularly effective for tasks like natural language processing, predictive analytics, model inference, and data preprocessing, delivering smooth, efficient performance and ensuring your AI/ML projects stay on track without disruptions.



Big Data Storage on Dedicated Servers

Companies generate massive amounts of data daily, from customer transactions to sensor logs. Real-time analytics and global accessibility are no longer optional—they're essential for staying competitive. This requires storage solutions that deliver high throughput, reliability, and security. Dedicated servers are built for these demands. They ensure your data is always secure, accessible, and manageable, giving businesses the tools they need to handle large volumes efficiently and scale as needed.

Without Dedicated Servers

Big data comes in massive volumes and diverse formats—structured, unstructured, and semi-structured. Handling such large and varied datasets presents its own set of challenges, including:

- **Velocity:** The speed at which data is processed is crucial, particularly for real-time or near-real-time data web applications.
- **Reliability and Access Speed:** Slow access or service outages can lead to costly disruptions in business operations.
- **Security:** Storing sensitive information in a shared environment presents significant risks, particularly in highly regulated industries.



With Dedicated Servers

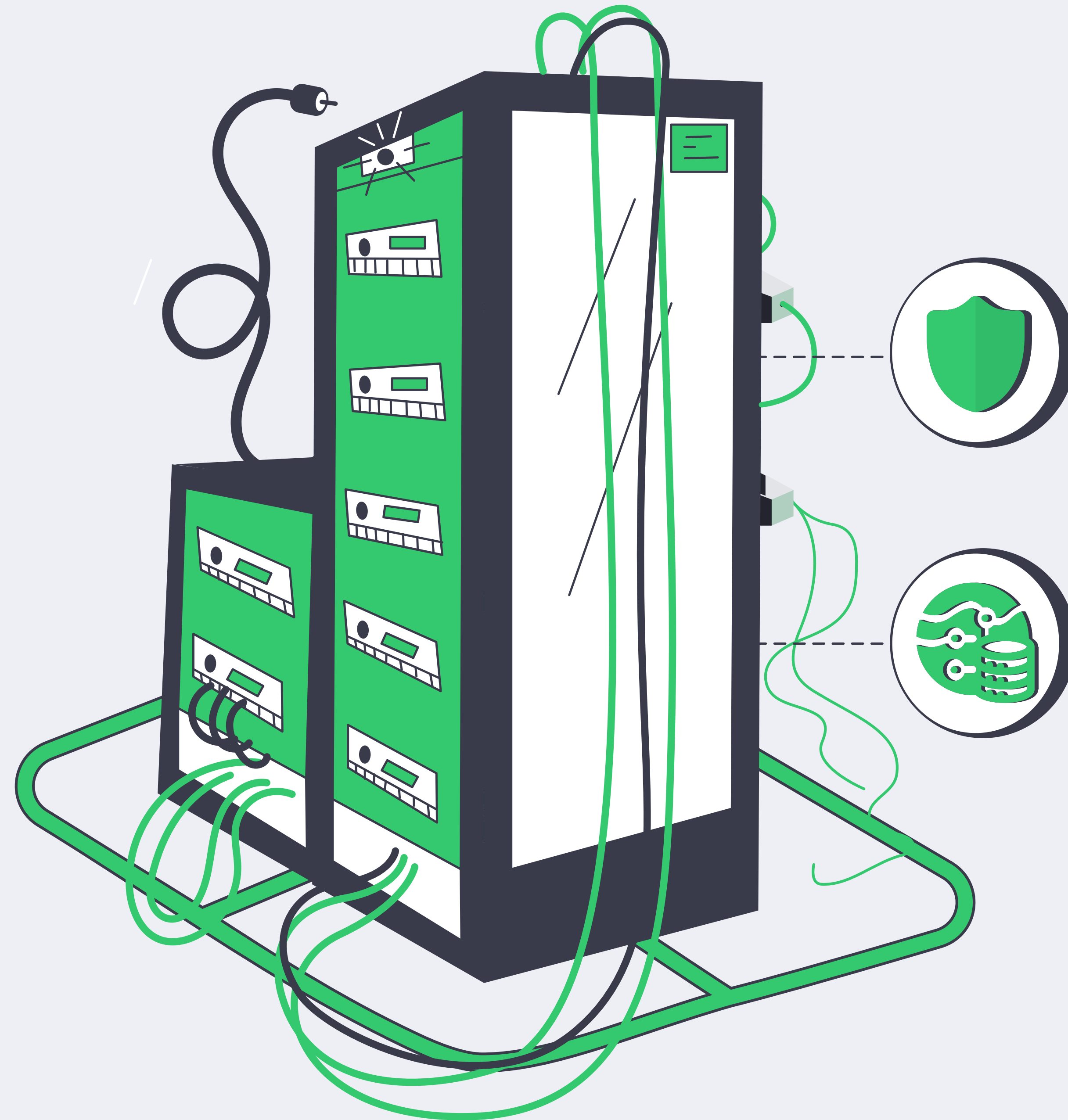
Dedicated servers are a powerful solution for managing large datasets efficiently. Unlike VPS setups, where resources are shared, dedicated servers guarantee exclusive access to CPU, RAM, and bandwidth. This means no "noisy neighbor" interference and no risk of bottlenecks, making them ideal for handling high-volume data processing tasks with ease.

With dedicated servers, you also get the flexibility to configure your hardware to match your needs. High-core CPUs, like Intel Xeon, are perfect for parallel processing, essential for data-intensive workloads. High-speed SSD or NVMe storage ensures quick access and write times, minimizing delays in data retrieval—critical for real-time analytics. And as your data grows, scalability is never an issue; you can add more resources to keep up with increasing demands without missing a beat.

Requirements

Component	Recommendation
CPU	Use multi-core processors like Intel Xeon for effective parallel data processing
RAM	Start with 128 GB, depending on the size and complexity of the data workloads
Storage	Employ NVMe SSDs for fast read/write speeds to manage large datasets efficiently
Bandwidth	Allocate high bandwidth to ensure smooth data transfer, particularly during peak usage times

Dedicated servers deliver the performance, reliability, and security essential for tackling big data storage challenges, making them a smart investment for companies aiming to improve their data management capabilities. With scalable, high-performance infrastructure, [Melbicom's dedicated servers](#) seamlessly support businesses in managing large datasets efficiently and unlocking valuable insights.



Business Continuity and Disaster Recovery with Dedicated Servers and Tier III Data Centers

Unplanned downtime, whether caused by cyberattacks, software failures, natural disasters, or network issues, can severely disrupt businesses. Dedicated servers offer robust protection against digital threats, making them a reliable choice for business continuity. However, physical risks like power outages, natural disasters, or single points of network failure can impact any hosting solution if the infrastructure isn't adequately prepared.

When downtime happens, the effects ripple across key business processes. For ecommerce platforms, it means lost sales as customers fail to complete transactions. SaaS applications face frustrated users and potential cancellations. Internal systems like CRMs or supply chain tools can stall, halting productivity. And for real-time services like streaming or analytics, even a short interruption can result in lost revenue and a damaged reputation.

Key Challenges

There are countless scenarios that can disrupt business operations, but here are some of the most common challenges businesses face:

- **Hardware Failures:** Unexpected hardware malfunctions, such as disk crashes or power supply issues, require redundancy mechanisms to ensure continued availability.
- **Cyber-Attacks:** Ransomware, DDoS attacks, and other cyber threats can compromise business operations and data integrity, necessitating strong security measures and proactive monitoring.
- **Human Errors:** Accidental deletion or misconfiguration by staff can lead to data loss or service disruption, emphasizing the need for data recovery options and backups.
- **Natural Disasters:** Events like floods, earthquakes, and storms can physically damage network or hardware and disrupt services, requiring robust failover infrastructure.



Building a Resilient Infrastructure

Dedicated servers excel in handling hardware and software failures, thanks to redundancy-focused designs and isolated environments. Features like duplicate power supplies and disk arrays ensure uninterrupted service during hardware issues, while snapshots and backups enable rapid recovery from software crashes or failed updates. As businesses grow, dedicated servers offer scalability, allowing CPU, memory, and storage to expand alongside operational needs, providing a reliable foundation for stability.

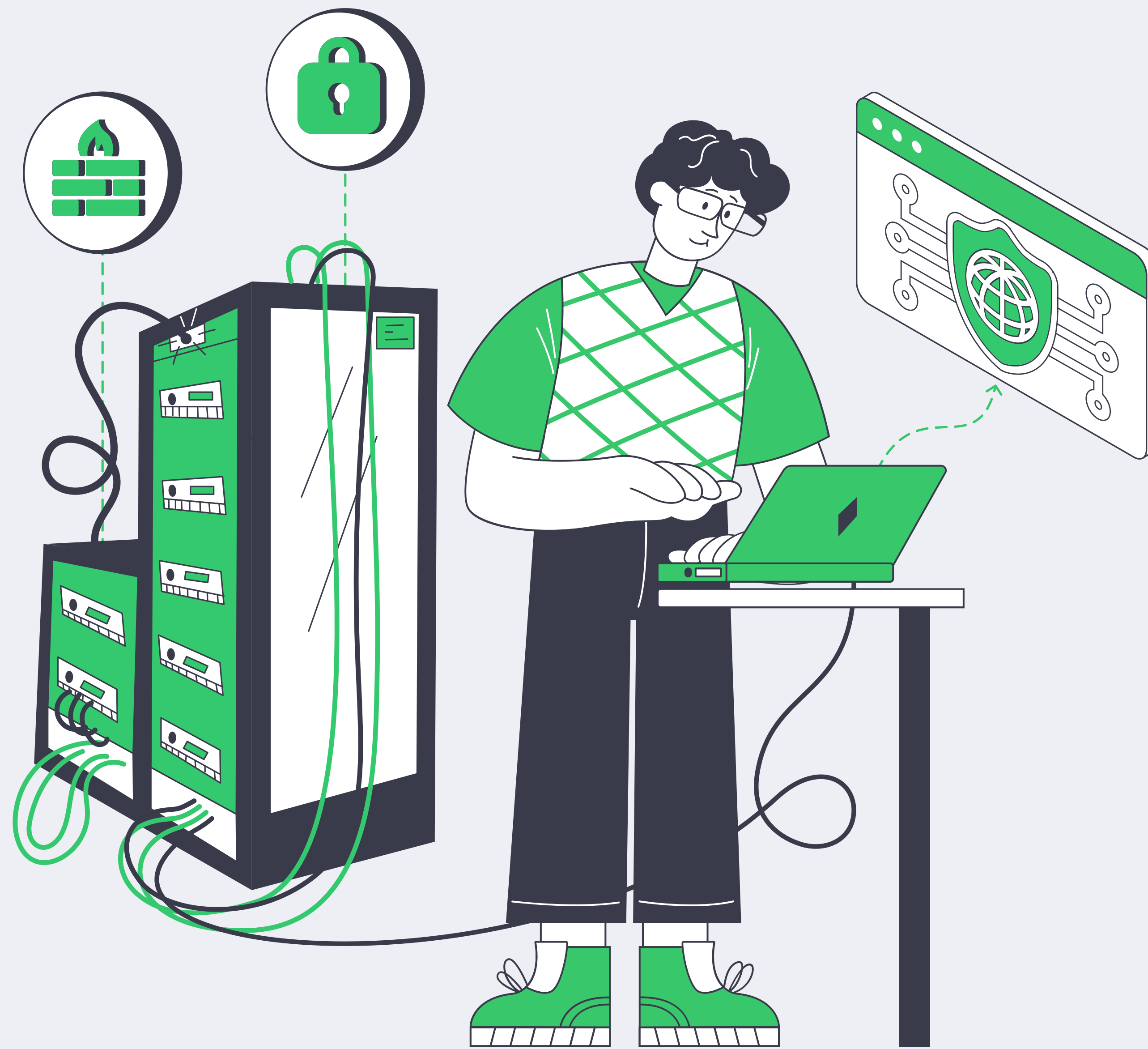
A dedicated backup server is just as critical. It provides a secure, reliable environment for storing essential data, helping companies minimize downtime and maintain business continuity. By investing in dedicated backup solutions, businesses take a proactive approach to safeguarding their operations, ensuring that critical data is always protected and recoverable.

But to truly minimize unplanned downtime, businesses need to think bigger—beyond just servers. The resilience of the data center infrastructure itself is key. [Melbicom's Tier III and IV data centers](#) set the standard, with features like dual independent network connections from separate ISPs, advanced fire suppression systems, robust physical security, and backup power solutions. These facilities are built to ensure uninterrupted operations, even in the face of network failures, power outages, or physical threats. This kind of reliability forms the foundation of a comprehensive, end-to-end business continuity strategy.

Requirements

Component	Recommendation
Data Center	Multiple geographically diverse data centers to ensure resilience against regional disasters
Network	Multiple network interfaces for redundancy and constant connectivity
Power Backup	Uninterruptible Power Supply (UPS) and backup generators to maintain uptime during power outages
Environmental	Advanced cooling systems to prevent hardware overheating and ensure stable operations
Monitoring	24/7 infrastructure monitoring for proactive response to potential issues and maintaining service health

Melbicom's solutions tackle business continuity challenges head-on. Their [dedicated servers](#) include only reliable options from trusted vendors with high-quality components, while their Tier III data centers provide the resilience businesses need. Each facility includes two independent [network connections](#) from separate ISPs, ensuring connectivity even during failures. With advanced fire suppression systems, robust physical security, and backup power solutions, this infrastructure is built to operate under any conditions.



Strengthening Cybersecurity with Reliable Dedicated Servers

Cyber threats are becoming more advanced, and risks like ransomware or espionage can wreak havoc on businesses. Think financial losses, reputational hits, and even legal trouble. That's where dedicated servers come into play. With exclusive access to your server's resources, they're a key piece of any strong cybersecurity plan. Here's why: dedicated servers offer DDoS protection, customizable firewalls, and intrusion detection systems. These tools work together to protect it from a wide range of threats.

Without Dedicated Servers

- **Increased Vulnerability:** Shared environments like cloud hosting or even VPS expose you to higher security risks due to resource sharing. Here's the problem: if one user on the server is compromised, or another tenant exploits a vulnerability in the hypervisor, others sharing the same hardware could be affected. Think of it as living in an apartment complex—if someone leaves their door open, it's not just their safety that's in jeopardy.
- **Limited Customization:** Shared environments often comes with default, one-size-fits-all security settings. That's bad news when you're up against sophisticated threats like ransomware or DDoS attacks. Without the ability to implement custom measures—like fine-tuned firewalls or advanced intrusion detection systems—you're left playing defense with the bare minimum.
- **Limited Control over Security:** In shared setups, establishing advanced security protocols like a "deny all" firewall is practically impossible. You're stuck with generic configurations designed for everyone, not your specific needs. It's like hiring a security guard who waves everyone through without checking credentials—not exactly the ideal way to minimize risks.



With Dedicated Servers

With dedicated servers, you're in the driver's seat. You get complete authority over your hardware and software, which means you can tweak security settings to fit your exact needs. Want to set up custom firewall rules? Done. Deploy intrusion detection systems (IDS)? No problem. With tools like Security Information and Event Management (SIEM) platforms and IDS, you can monitor network activity and respond to threats in seconds.

Dedicated servers offer an exclusive, isolated environment that drastically reduces your attack surface. Hackers have a harder time finding vulnerabilities because the server is reserved entirely for your business. And since no resources are shared, your security tools can operate at peak efficiency—giving you the peace of mind that your defenses are working exactly as they should.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon
RAM	Minimum of 64 GB to support multiple security applications
Storage	NVMe SSD for fast data access and secure storage
Bandwidth	High bandwidth and redundancy for uninterrupted connectivity

Dedicated servers deliver the control, performance, and reliability you need to combat today's sophisticated cyber threats. With [Melbicom's dedicated server solutions](#), you get built-in DDoS protection, customizable firewall configurations, and 24/7 security monitoring. It's a rock-solid defense system designed to keep your business safe.



Dedicated Servers for Data Backups

Backing up your data isn't optional. Every business needs a solid plan to ensure critical information is safe. Why? Because the stakes are high. Think about this: ransomware attacks have skyrocketed in recent years, and losing access to your data can bring your operations to a halt. Dedicated servers help mitigate this risk by giving you full control over your backup strategy. Unlike shared solutions, they're fast, reliable, and secure.

Without Dedicated Servers

Without dedicated backup infrastructure, businesses often rely on shared solutions like VPS or on-site storage (e.g., NAS devices, RAID arrays, or local servers), both of which come with significant risks:

- **Security Vulnerabilities:** Shared hosting's multi-tenant setup increases exposure to breaches or accidental data leaks. On-site storage, while offering more control, is prone to physical security threats, hardware failures, and insufficient network protection—leaving sensitive information vulnerable.
- **Unpredictable Performance:** Let's be honest—security is just the beginning. The lack of exclusive access to hardware resources can lead to inconsistent backup performance, making it difficult for businesses to meet Recovery Point Objectives (RPOs) and Recovery Time Objectives (RTOs) reliably.



With Dedicated Servers

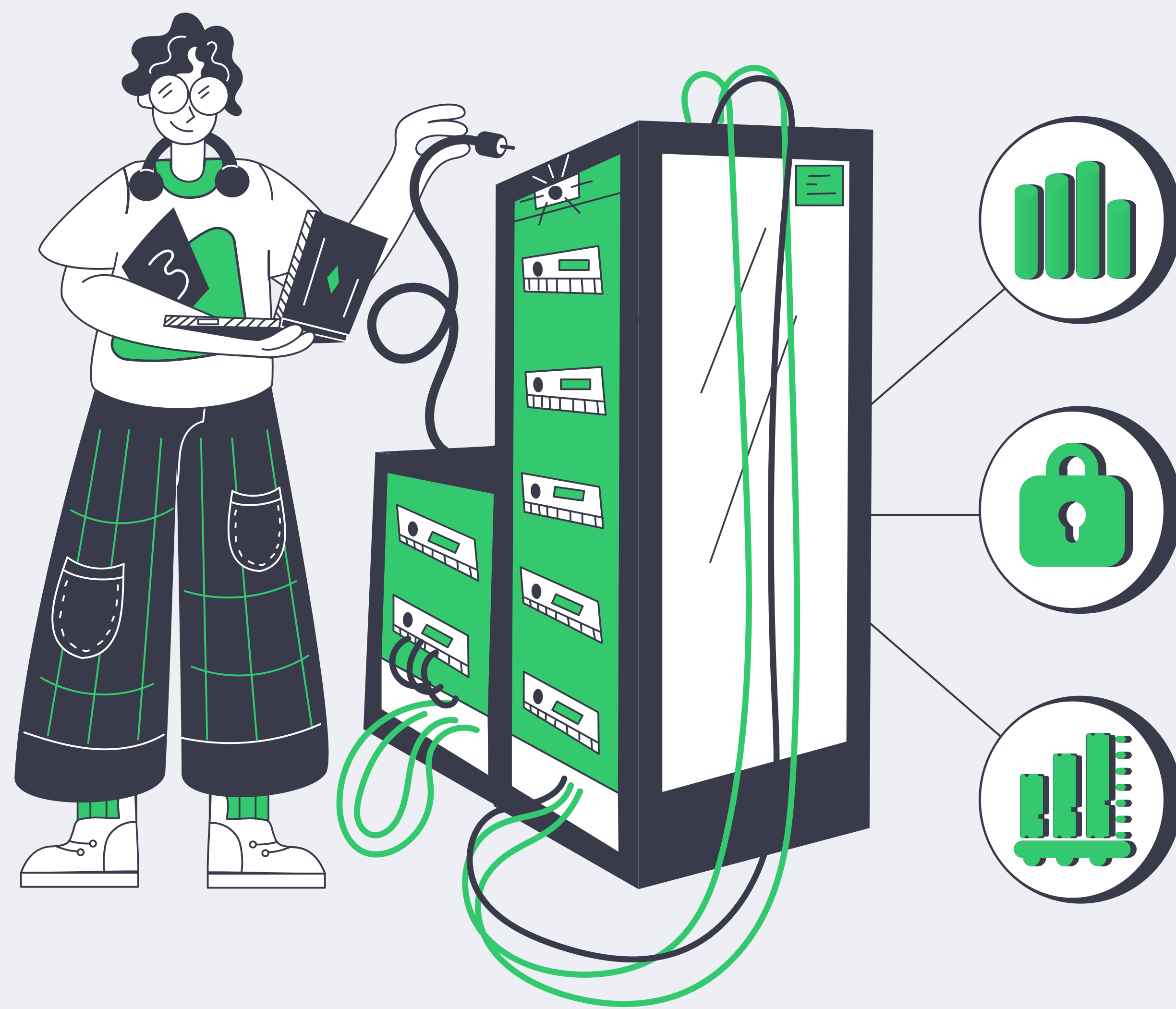
Dedicated servers put you in the captain's chair when it comes to security. You have full control to set up custom firewalls, encryption, and other measures to safeguard sensitive data. Plus, RAID storage configurations provide an extra layer of redundancy, ensuring even stronger data protection. This means you're in charge of minimizing risks like unauthorized access or data loss.

As your backup data grows (and it will), dedicated backup servers make scaling effortless. Need more resources? Done. You can expand both computing resources and storage seamlessly without compromising reliability or performance.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon for efficient handling of backup workloads
RAM	Minimum 64 GB to ensure smooth data transfer and handle large datasets effectively
Storage	Use NVMe SSDs for fast read/write speeds, or HDDs with RAID for cost-effective redundancy
Bandwidth	High bandwidth (1 Gbps or more) to support timely backups without network congestion

Dedicated servers give you a rock-solid, secure, and scalable foundation for managing your data backups. They also let you shape your environment exactly how you need it. Whether you're storing huge datasets or building complex redundancy systems, you've got the tools to create a solution that fits your business perfectly. Not using dedicated servers for your backups yet? It's time to change that! Melbicom is here to back you up with [top-tier dedicated server solutions](#) from the most trusted vendors in the industry.



Dedicated Servers for Database Hosting

Databases are the backbone of many business operations, handling everything from customer records to financial transactions. As businesses grow, the demands on their databases increase, necessitating a reliable and high-performing hosting solution. With global trends emphasizing data-driven decision-making and stricter compliance requirements, choosing the right hosting infrastructure is critical. Dedicated servers offer the efficiency, dependability, and control needed for effective database hosting, ensuring your data is always available. Whether you need to host MySQL databases, MongoDB, or PostgreSQL, dedicated servers provide the optimal solution.

Without Dedicated Servers

Relying on shared infrastructure introduces several issues that can compromise the performance and security of critical databases:

- **Resource Contention:** In shared environments, databases must compete with other users for CPU, memory, and bandwidth, leading to performance bottlenecks, especially during peak periods.
- **Limited Control:** Shared infrastructure comes with standardized configurations that offer limited customization options. This makes it difficult for businesses to optimize server settings for specific database needs (e.g., MySQL requires tailored `my.cnf` tuning, while MongoDB performs best with Linux and specific file systems like XFS, requiring different infrastructure).
- **Security Risks:** Sharing server resources means sharing vulnerabilities. A security incident affecting one user could potentially impact all users on that server, making shared environments unsuitable for sensitive data.



With Dedicated Servers

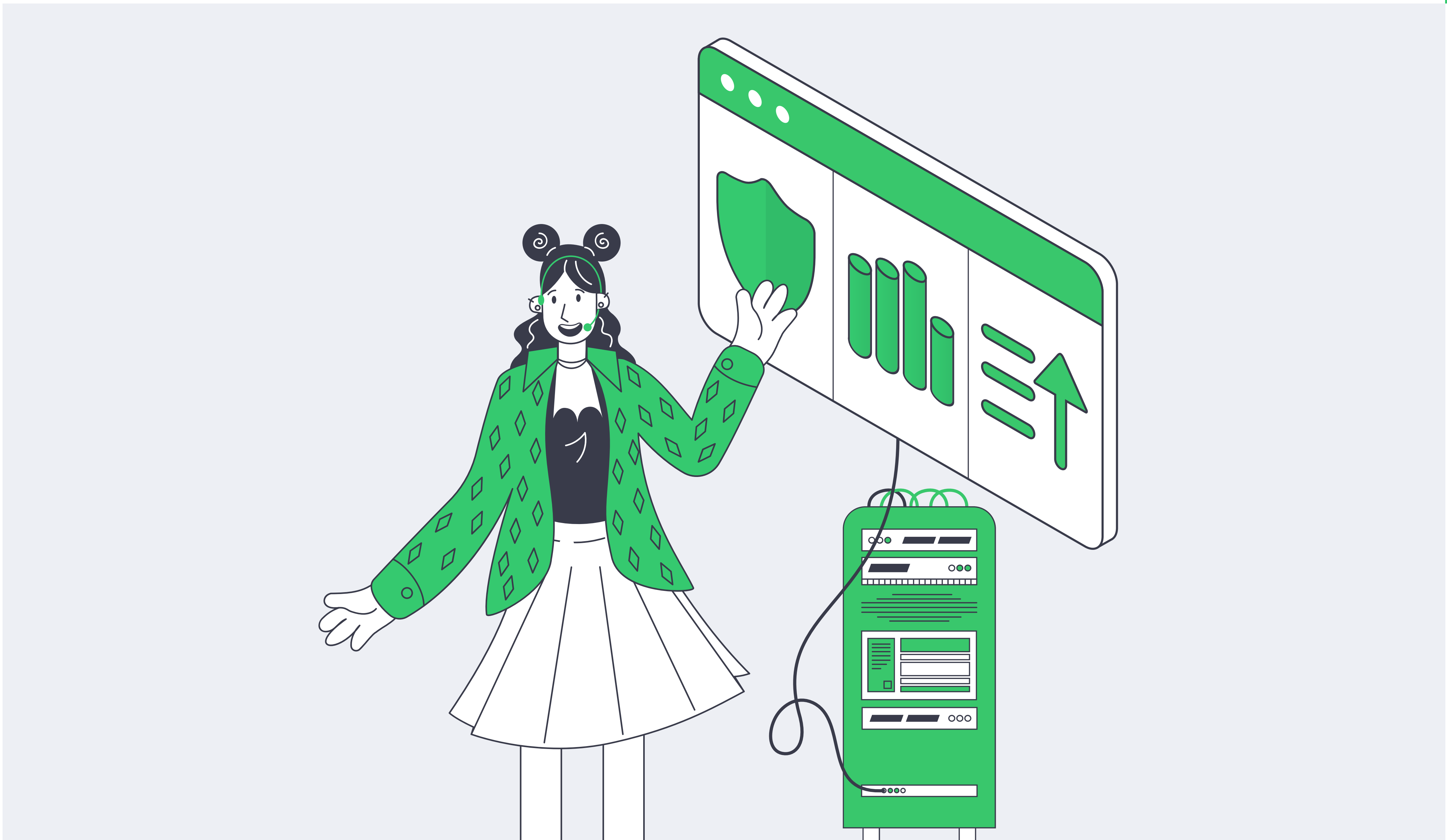
With a dedicated server, your database gets VIP access to CPU, RAM, and storage—no sharing, no slowdowns. This means consistent, high-performance operations without the hassle of resource contention. Plus, you're in full control of the hardware and software stack, giving you the power to fine-tune everything to your database's exact needs. Whether it's selecting the ideal operating system or setting up advanced caching, dedicated servers offer unparalleled flexibility for hosting MySQL, MongoDB, or any other database.

And let's talk security. Dedicated servers let you roll out custom firewalls, encryption protocols, and access controls tailored to your needs. Sensitive data stays locked down, giving you serious peace of mind—especially in banking, healthcare, and other industries where top-notch data protection isn't just nice to have, it's non-negotiable.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon for handling complex database queries
RAM	Minimum 64 GB to support efficient database performance and reduce query response times
Storage	NVMe SSDs for rapid data access, or HDDs with RAID configurations for added redundancy
Bandwidth	High bandwidth (1 Gbps or more) to ensure smooth data access for multiple concurrent users

Dedicated servers provide a secure, scalable foundation for managing databases and let you configure the environment exactly as needed. Whether you're storing huge datasets, building complex redundancy systems, or looking for the best MySQL database hosting service, you have the flexibility to create a solution tailored to your business. If you're looking to buy a server for your database, Melbicom is here to support you with [top-tier dedicated server solutions](#) from the most trusted vendors in the industry.



Dedicated Servers for Hosting On-Premises CRM Systems

Hosting an on-premise CRM system on a dedicated server gives your business a key advantage. Sure, cloud-based CRM systems can be convenient, but they often drop the ball when it comes to handling sensitive data. With a dedicated server, you're in control. You get a secure, reliable infrastructure that is built to handle large CRM databases and heavy workloads without breaking a sweat.

Without Dedicated Servers

Using shared environments, such as VPS or cloud hosting solutions, to host an on-premise CRM comes with inherent limitations:

- **Resource Exclusivity:** When CPU, RAM, and bandwidth are shared, slowdowns during peak usage are almost inevitable. This means slower CRM pages and data loads and reduced productivity for your team—frustrating, right?
- **Security Concerns:** Shared environments can leave your system more exposed to breaches and vulnerabilities, especially when handling sensitive customer data. They also restrict your ability to customize or implement security measures tailored to your organization's specific needs.



With Dedicated Servers

Dedicated servers eliminate these challenges by offering exclusive hardware access, ensuring all resources—CPU, RAM, bandwidth—are fully dedicated to your CRM system. This means faster response times, a smoother user experience, and a big productivity boost for your team, even when you're working with large customer databases or running complex queries.

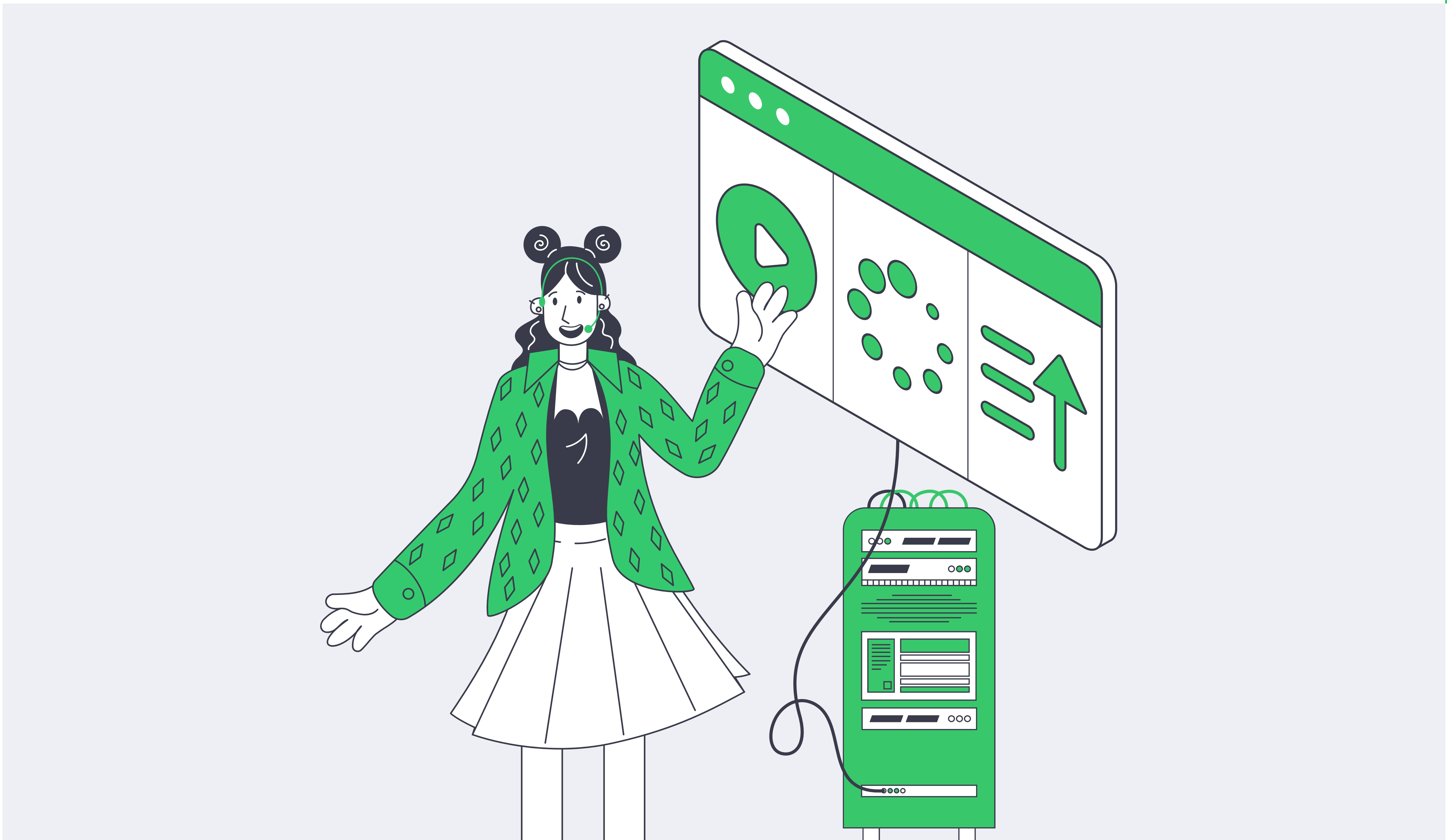
On the security side, dedicated servers put you in control. You can set up custom firewalls, intrusion detection systems, and other protective measures to keep sensitive CRM data safe. This is especially important for industries like healthcare, government, or finance, where data breaches aren't just inconvenient—they're catastrophic.

And let's not forget customization. With dedicated servers, you can configure your environment to fit your exact needs—whether that's the operating system, software, or database setup. Scaling is a breeze too. As your business grows, you can easily add resources, making sure your CRM infrastructure keeps up without missing a beat.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon
RAM	Minimum of 64 GB for handling large CRM databases
Storage	SSDs for faster data access; combine with HDD for archiving
Bandwidth	Sufficient capacity to support high concurrent usage

Dedicated servers are a solid choice for optimizing CRM systems, providing the performance, reliability, and customization businesses need to maximize their tools. For companies aiming to enhance their CRM capabilities, investing in dedicated server solutions ensures a stable and efficient environment. With Melbicom, you get **best dedicated servers only from the most trusted vendors**, built with reliable components, so your CRM operates on a dependable foundation.



Dedicated Servers for Video Streaming Services

Video streaming services are under constant pressure to deliver flawless, high-quality content to viewers worldwide. Whether it's live events, training videos, or on-demand content, the expectations are clear: zero buffering, minimal latency, and seamless scalability—even for massive audiences. These challenges can make or break the user experience, especially during peak times. Dedicated servers present an ideal infrastructure for tackling the demands of video streaming. Unlike shared environments that often buckle under peak-time pressure, dedicated server clusters deliver the reliability and performance needed to handle even the most demanding streaming workloads with ease.

Without Dedicated Servers

Without dedicated servers, video streaming services are likely to face a number of serious issues that compromise user experience:

- **Buffering and Latency:** Buffers and latency are the most common headaches for streaming ops, especially in shared setups.
- **Resource Competition:** During peak times, competition for resources—including CPU, RAM, and bandwidth—leads to unpredictable streaming quality and interruptions.
- **Resource Contention:** Shared environments introduce resource contention, leaving viewers at risk of abandoning the service.
- **Technical Debt:** For businesses attempting to manage their own streaming operations in-house, technical debt becomes a major burden, with ongoing server maintenance and upgrades draining valuable resources and reducing operational agility.



With Dedicated Servers

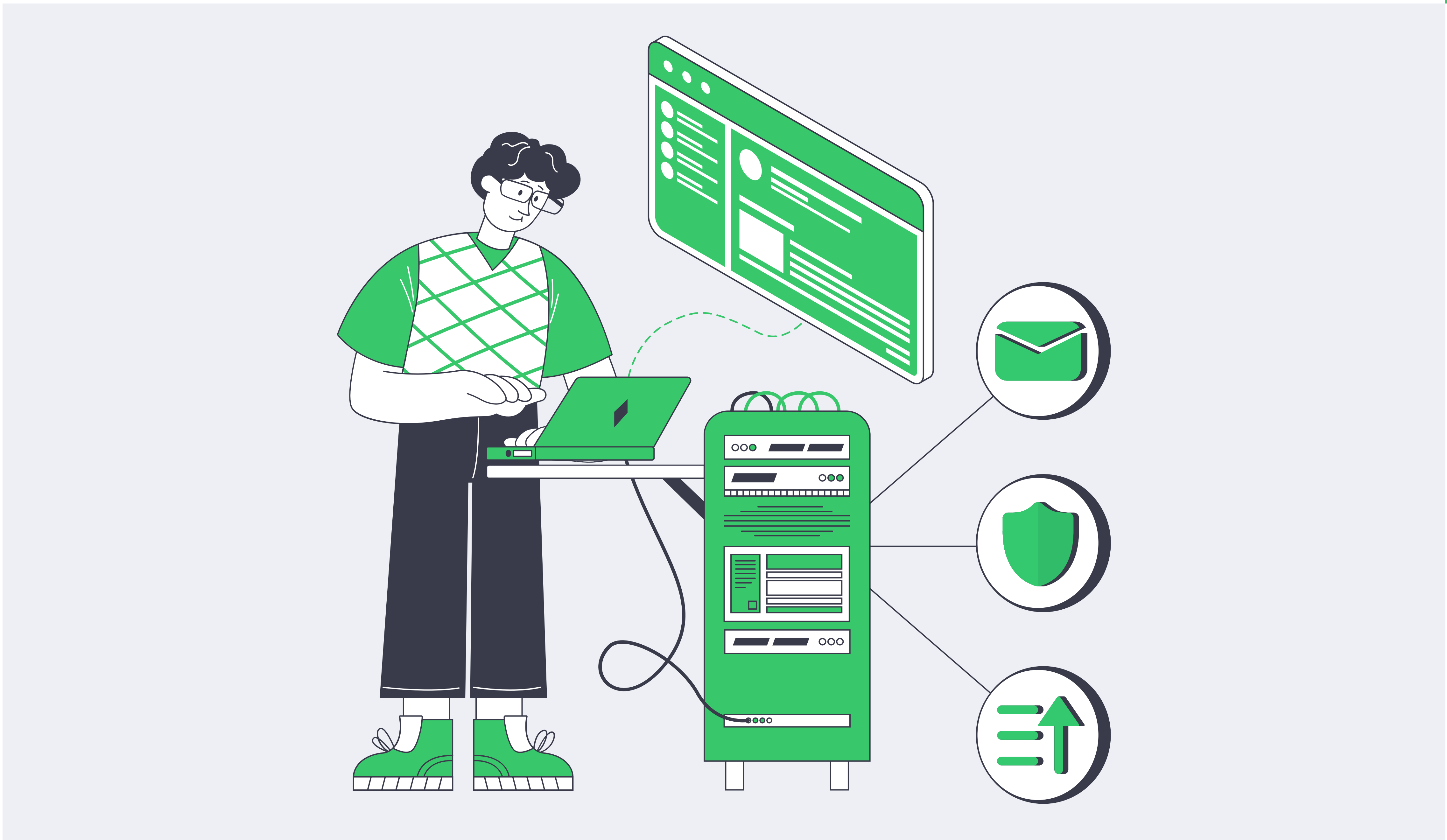
Using dedicated servers for video streaming solves many common headaches and sets the stage for smooth, reliable performance. With exclusive access to hardware resources like CPU, RAM, bandwidth, and storage, there's no competition for resources—just seamless performance. High-performance CPUs and NVMe SSDs handle video encoding and decoding like pros, keeping buffering and latency to a minimum. Add in network optimization technologies like BBR (Bottleneck Bandwidth and Round-trip Propagation Time), and you've got ultra-low latency streaming—perfect for live events or interactive apps.

Beyond performance, dedicated servers deliver top-notch security, too. No resource sharing means fewer vulnerabilities, and complete control over firewalls and intrusion detection keeps your content safe from prying eyes or malicious attacks. Need to scale? No problem. Adding more CPUs, RAM, or network capacity is a breeze, so you can handle growing audiences without sacrificing stream quality.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon with 16+ cores for effective video encoding and decoding
RAM	Minimum 64 GB, ideally more for handling multiple streams simultaneously
Storage	NVMe SSDs for rapid data access and smooth video delivery
Bandwidth	1 Gbps to 20 Gbps, depending on audience size and quality needs

Dedicated servers are the secret sauce to delivering a flawless, high-quality streaming experience, and Melbicom makes it effortless to get started. With **dedicated servers** strategically located in data centers across the globe, you can count on low latency and top-tier performance for your viewers, no matter where they are. Melbicom's powerful and scalable solutions keep your streaming service running smoothly, helping you create an experience your audience will love—and keep coming back for.



Dedicated Servers for Email Server Hosting

Email hosting isn't just about sending messages; it's the backbone of modern business correspondence, the invisible thread tying critical operations together. For businesses navigating sensitive waters—be it legal negotiations or patient records—the infrastructure behind that email matters. Public email services, with their one-size-fits-all approach, often fall short of the unique demands of such enterprises.

Dedicated servers, purpose-built for hosting Exchange Server-type platforms, provide a solution that ensures businesses can operate seamlessly, no matter the stakes. Take, for instance, a financial institution managing client portfolios worth billions. A sudden server hiccup could delay communication, damaging relationships and reputations. Similarly, healthcare providers and legal firms, juggling sensitive and regulated data, cannot afford lapses in security or performance. In these scenarios, having the right infrastructure isn't just advantageous—it's essential.

Without Dedicated Servers

Behind every successful email infrastructure lies a minefield of challenges:

- **Public Email Hosting Limitations:** These platforms often struggle with large data volumes, fail to prioritize privacy, and rely on shared IPs that can negatively impact sender ratings, making them unsuitable for businesses requiring confidentiality.
- **Resource Constraints with VPS:** A VPS setup, though cost-effective, caps crucial resources like CPU and memory, leading to bottlenecks during high-demand periods.
- **Storage Restrictions:** Shared infrastructures enforce stringent storage limits, causing operational inefficiencies and potential compliance risks for industries with strict customer data retention requirements.



With Dedicated Servers

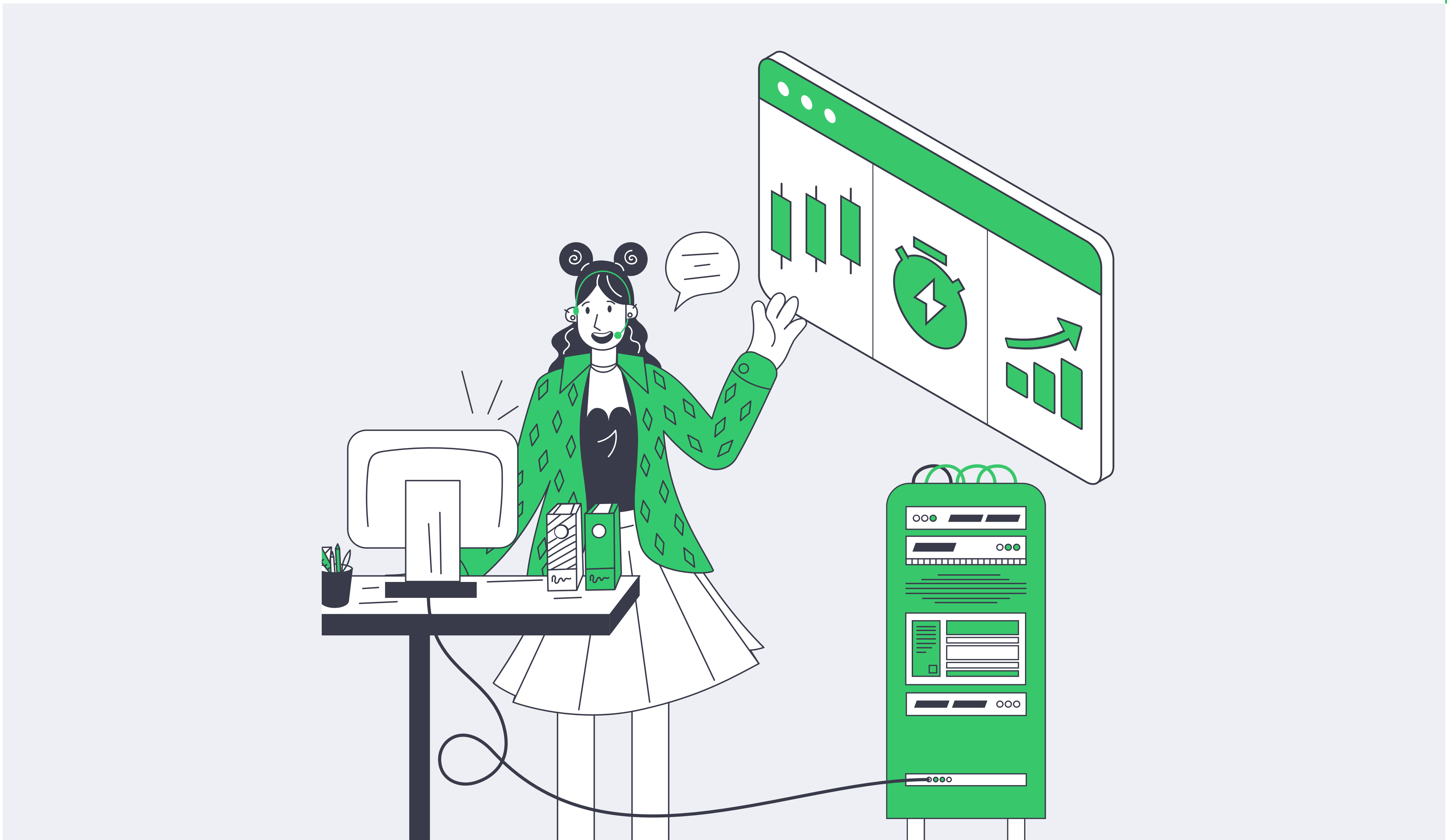
Dedicated servers are more than an upgrade; they are essential for businesses that demand seamless performance and robust security. A dedicated IP address enables businesses to refine sender reputation, a feature also available with VPS but offering enhanced customization and isolation in dedicated setups. Risks from shared IP issues, such as blacklisting, are significantly reduced, and exclusive resources ensure prompt email delivery even during peak loads. Bulk campaigns run smoothly, improving inbox placement and building trust with providers like Gmail.

Unlike shared environments, dedicated servers provide virtually unlimited storage options, allowing businesses to retain essential email records for compliance or operational needs. They also allow businesses to configure their environments to fit specific needs, from selecting software to implementing advanced filters, putting control entirely in the hands of the business. Additionally, dedicated hosting ensures isolation from other users, reducing vulnerabilities. Advanced security measures like DDoS protection protect sensitive customer information.

Requirements

Component	Recommendation
CPU	Modern processors like Intel Xeon
RAM	Minimum of 32 GB to handle heavy email hosting loads
Storage	SSDs or NVMe drives for fast read/write performance
Bandwidth	High bandwidth (1 Gbps or higher) to ensure seamless email operations

In a world where communication can make or break a business, settling for less than optimal infrastructure is not an option. With [Melbicom's dedicated server solutions](#), companies secure the foundation they need for impeccable, uninterrupted email hosting. After all, in business, it's not just the message that matters—it's how it's delivered.



Dedicated Servers for Forex and Trading Terminals

In the fast-paced world of Forex (FX) and trading, speed and precision are non-negotiable. Markets move in real time, and traders need infrastructure that's built for split-second decisions. Trends like high-frequency trading and the rise of algorithmic participation have only raised the stakes. A dedicated server delivers the reliability and low latency required for lightning-fast trade execution, making it an essential tool for serious traders who can't afford to miss a beat.

Without Dedicated Servers

While popular trading terminals like MetaTrader (MT) are commonly run on home PCs and VPS solutions, shared resources can pose significant challenges.

- **Performance Issues:** Shared infrastructure leads to resource competition and unpredictable performance during peak trading times. Rock-solid stability and processing power are required to handle complex algorithms without breaking a sweat.
- **Network Latency and Downtime Risks:** Home PCs and unreliable internet connections can't provide the 24/7 uptime guarantee. With trading, even a few seconds of downtime can result in significant losses, especially for automated trading systems. As highlighted in discussions, market volatility means a delay during a critical moment can cause substantial cascading failures.
- **Security Concerns:** Sensitive financial data and trading algorithms, which could be worth a fortune, require robust security measures. Without a dedicated environment, data becomes vulnerable to attacks or breaches, leading to critical consequences.



With Dedicated Servers

Dedicated servers eliminate these issues by providing exclusive access to resources, ensuring low latency, reliability, and the stability necessary for peak trading performance. Think of it as upgrading from a "family sedan" to a "Formula One race car" purpose-built for speed and precision—unlike the limitations of home PC or VPS solutions.

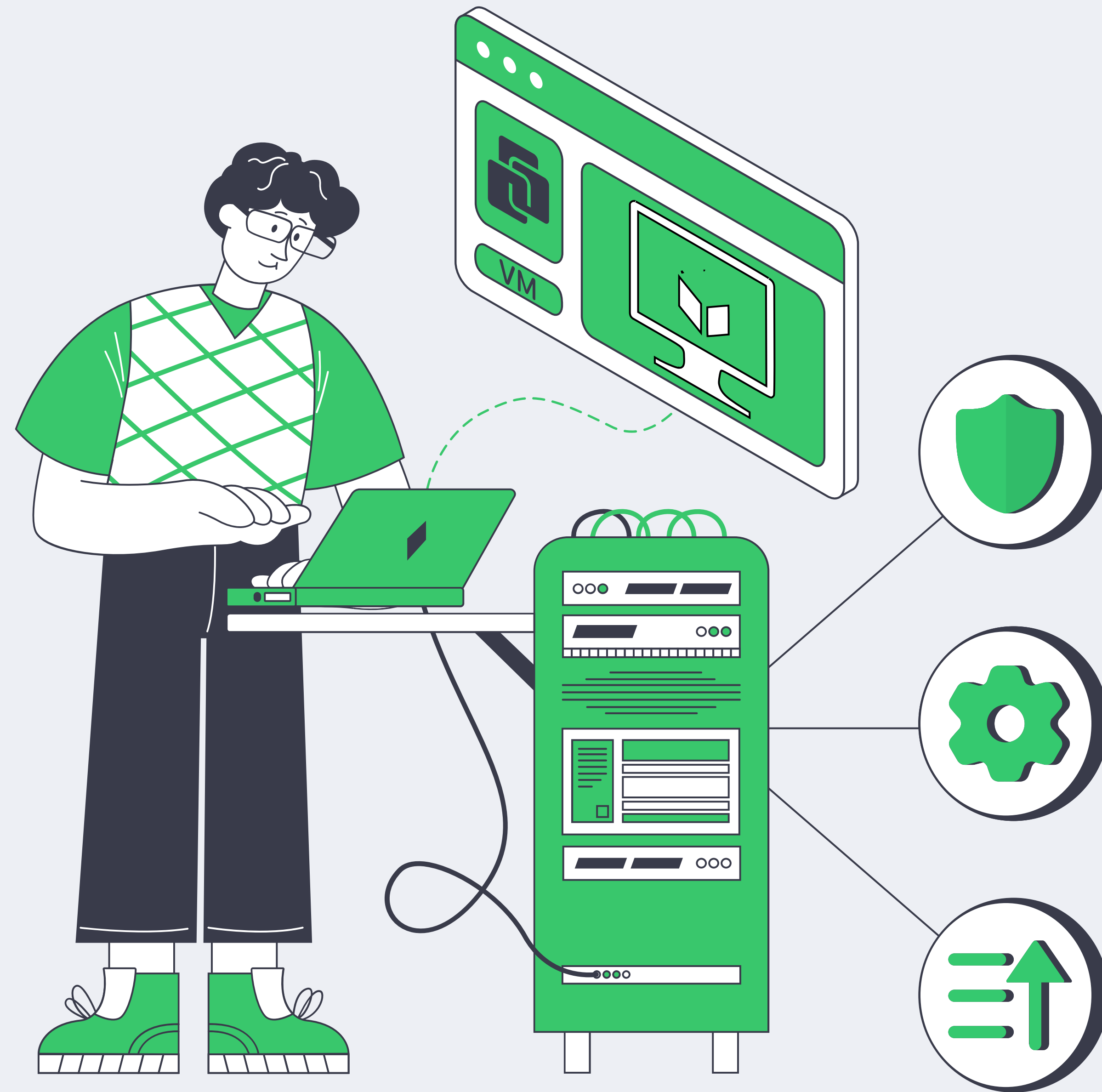
Server location? It's a must. In trading, latency can make or break your success. Melbicom deploys infrastructure in Tier III and Tier IV data centers near financial hubs, with [full network redundancy](#)—dual switches, core routers, and VRRP for reliable, low-latency performance critical for high-impact trading.

Shared environments can pose significant security risks and weaker isolation compared to dedicated servers. For traders managing sensitive financial data and proprietary expert advisors (EAs), a dedicated server is essential—providing enhanced security, exclusive resources, and full control to safeguard critical operations.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon
RAM	Minimum 64 GB for real-time data processing
Storage	NVMe SSD for high-speed read and write operations
Bandwidth	High bandwidth and low latency for smooth trade execution

Dedicated servers are an ideal choice for trading, offering the stability, control, and security required in this high-stakes environment. Melbicom provides tailored dedicated server solutions for Forex an MetaTrader with multiple data center locations, allowing traders to minimize latency by choosing servers closest to their broker. Explore [Melbicom's dedicated servers](#) to take your trading to the next level.



Dedicated Servers for Virtualization and Virtual Machines

Virtualization is at the heart of modern IT infrastructure, driving efficiency, workload consolidation, and seamless scalability. From development environments to ERP, CRM, and beyond, businesses rely on virtual machines (VMs) to keep operations running smoothly. But here's the catch—virtualization needs a solid foundation, and dedicated servers deliver the reliability, power, and control required to scale without compromising performance or security. In a world where resource optimization defines success, dedicated servers are the backbone for virtualization, ensuring your infrastructure keeps pace with your ambitions.

Without Dedicated Servers

- **Security Concerns:** If a company cares about security, they understand the importance of isolating business processes like development, marketing, or accounting. However, using a shared VPS for virtualization is fundamentally risky—it's like writing a secure password on a sticky note and leaving it on your monitor. Shared environments introduce vulnerabilities that can expose sensitive data if neighboring tenants are compromised. This makes shared VPS a poor choice for businesses prioritizing security.
- **Performance-Wise,** renting cloud resources or a generic VPS for virtualization often leads to unpredictable results. If your server neighbor is an online store running a holiday sale, their traffic spike could drag down your business-critical processes. This kind of unpredictability disrupts operations, delays decisions, and brings risks no business should accept.
- **Hidden Costs:** With VPS-based infrastructure, businesses often end up paying for more than they use due to limited control over how rented resources are allocated among tenants and the level of overselling by the hosting provider. This can lead to unexpected expenses when resources are throttled or require sudden upgrades.



With Dedicated Servers

Using dedicated servers for virtualization removes performance bottlenecks by providing exclusive access to hardware resources. With dedicated CPU, RAM, and storage, each virtual machine gets the power it needs without interference—drastically reducing latency and boosting efficiency. This setup empowers system administrators to deploy multiple VMs tailored for specific purposes, like ERP, CRM, email marketing, and more, all while avoiding resource contention.

Flexibility is baked in. Businesses can upgrade CPUs, expand RAM, or scale storage to meet growth demands—perfect for handling seasonal spikes or scaling services on demand. Dedicated servers also give admins the freedom to implement custom security measures, from tailored firewall rules to network segmentation and intrusion detection systems. This level of control ensures compliance with industry standards and delivers a secure, high-performance environment for virtualized workloads.

Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon
RAM	Minimum 64 GB, expandable as needed
Storage	NVMe SSD for fast read/write operations
Bandwidth	High bandwidth to handle multiple VMs concurrently

Dedicated servers provide unmatched support for virtualization, and this performance isn't just theoretical—it directly affects how effectively your business operates and how efficiently your teams perform. Melbicom offers [dedicated server options](#) tailored to meet specific virtualization needs, from high-performance workloads to secure multi-VM setups, ensuring smooth operations and scalability.



Dedicated Servers for ERP Systems

ERP systems are critical for managing key business processes like finance, HR, and supply chain. But without the right infrastructure, they can hit performance bottlenecks, slowing down productivity and decision-making. ERP software such as Epicor, NetSuite, and Odoo are demanding—but dedicated servers handle them with ease. They offer stability, control, and scalability, keeping operations smooth and decisions smarter.

Without Dedicated Servers

Without dedicated servers, ERP systems face significant challenges, much like trying to host a high-profile event in a shared venue with limited space and resources. Here's why:

- **Performance Challenges:** ERP systems demand significant resources, especially when handling large data loads or running complex processes. Shared environments often lack the capacity to keep up, resulting in sluggish response times, delays in report generation, and difficulties supporting multiple users simultaneously. This directly hinders productivity.
- **Security Concerns:** Managing sensitive data—like financial records, employee details, and customer information—requires robust security. In shared environments, vulnerabilities increase, putting businesses at greater risk of data breaches and compliance violations.
- **Customization Limitations:** ERP systems often require specific configurations, from software dependencies to operating system requirements. Shared hosting can restrict customization, leading to compatibility issues and system instability.



With Dedicated Servers

Dedicated servers give ERP systems the power they need to run like clockwork. With dedicated CPU, RAM, and storage, they deliver reliable performance, even during peak times. High-performance processors like Intel Xeon handle heavy ERP workloads effortlessly, so you never have to worry about slowdowns.

Security is a big win here too. With dedicated servers, you're in control—custom firewalls, intrusion detection, and encryption keep sensitive data safe and industry-compliant. No shared environment risks, no compromises.

And let's talk flexibility. You can tailor the OS, hardware, and software to perfectly match your ERP needs. Scaling? Easy. Add more RAM, storage, or CPU whenever you're ready—no migrations needed. It's a future-proof solution built to grow with your business.

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Requirements

Component	Recommendation
CPU	Multi-core processors like Intel Xeon
RAM	Minimum of 128 GB for efficient performance
Storage	NVMe SSDs for fast read/write speeds
Bandwidth	High bandwidth for supporting multiple users

Dedicated servers deliver everything ERP systems need to run smoothly—performance, security, and customization. Whether your business uses IFS, Epicor, NetSuite, or Workday —at Melbicom, you'll find [a range of dedicated server configurations](#) available across multiple data centers, so you can ensure top-tier performance and speed no matter where your business operates.



Dedicated Servers for Storage and DAM

Businesses generate staggering volumes of content daily—high-resolution images, videos, design files, marketing assets, and structured databases, all demanding secure, efficient, and scalable storage. Digital Asset Management (DAM) systems play a crucial role in organizing this chaos, streamlining workflows and housing critical resources like corporate media libraries. But behind the scenes, these systems rely on powerful infrastructure to function seamlessly. Dedicated servers provide the performance, scalability, and control needed to handle both general storage demands and the specific challenges of DAM applications, ensuring nothing slows you down.

Without Dedicated Servers

Organizations often cut corners on storage solutions, underestimating the real-world impact of their choices. Many rely on outdated in-house servers or opt for shared environments to save costs. While this might seem economical upfront, the long-term consequences often outweigh the savings.

- **Fragmented Storage Inefficiency:** Scattered files across external drives, outdated systems, or mismatched cloud solutions create an invisible tax on collaboration. Fragmentation requires extra effort to maintain consistency. Every delayed search for a file or version mismatch adds up, slowing down teams and eroding productivity.
- **Hidden Costs:** Resource contention in overcrowded shared setups results in slow uploads, lagging data processing, and frequent bottlenecks. The promise of savings on infrastructure often evaporates as sluggish operations undermine the bottom line.
- **Security Risks:** Sensitive data stored internally faces threats from physical damage, human error, and insufficient safeguards. Shared environments pose a different danger: risky neighbors whose activities can jeopardize security and performance. Without the protections of dedicated servers, reliability remains a gamble.



With Dedicated Servers

When it comes to managing data and digital assets, dedicated servers are the infrastructure equivalent of upgrading from a bike to a bullet train. They don't just solve the problems of fragmented storage or sluggish file transfers—they obliterate them.

On a dedicated server, all your organization's videos, images, and documents live in a centralized, high-performance system, where files are available as quickly as you can click. The sluggish lags of shared setups are gone, replaced with fast uploads, seamless processing, and a workflow that hums along without interruption. Teams can focus on what they do best—creating, collaborating, and delivering.

And then there's security. Dedicated servers are a fortress, giving businesses the tools to build ironclad firewalls, encrypt sensitive data, and restrict access down to the user level. The dangers of risky neighbours simply don't exist. The control lies firmly in your hands, ensuring peace of mind whether you're safeguarding proprietary designs or sensitive customer information.

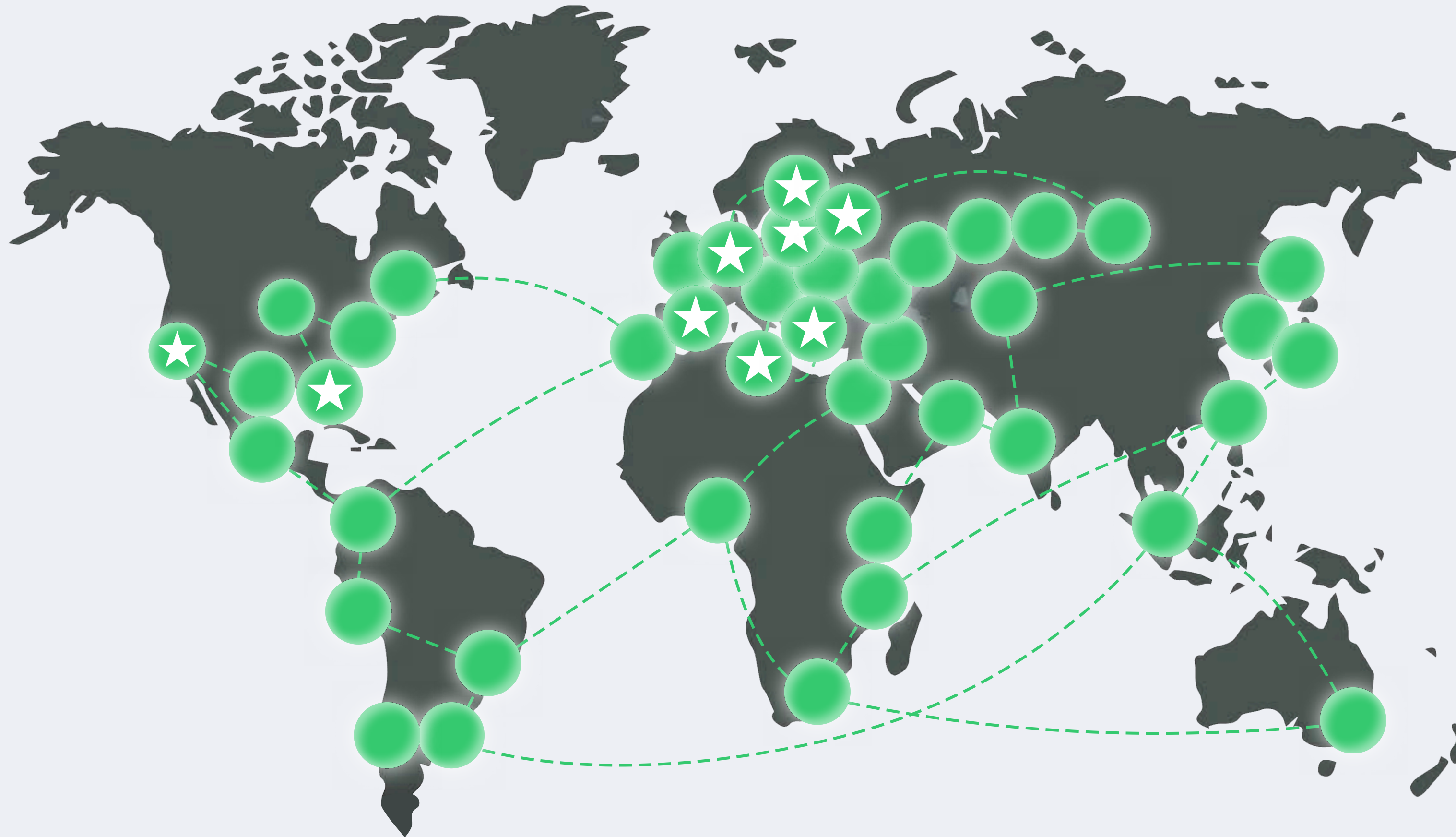
But perhaps the greatest advantage is scalability. Need more storage for a growing media library? Extra bandwidth for surging user demands? With dedicated servers, you don't just scale—you evolve, adapting your infrastructure to meet tomorrow's challenges with ease. For businesses ready to turn data chaos into an asset, dedicated servers are not just an answer—they're the only answer.

Requirements

Component	Recommendation
CPU	High-core processors like Intel Xeon for efficient multi-threading
RAM	Minimum 128 GB to support high concurrent usage
Storage	High bandwidth with options for unlimited traffic to support frequent file transfers
Bandwidth	Built-in firewalls, encryption, and role-based access control

As businesses navigate the growing complexities of modern data and DAM, dedicated servers provide a focused and robust solution. For organizations consolidating digital assets or preparing for future demands, Melbicom represents a reliable starting point, offering dependable [dedicated servers](#) housed in Tier III data centers.

Own CDN network – nodes in Europe, Asia, Australia and Oceania, North and South America, Africa.



Dedicated Servers for CDNs

In a world where audiences are increasingly global, it's not enough for content to just exist—it needs to get to users fast. Whether you're running a video streaming platform, a gaming service, or a corporate system where speed is everything, you might start thinking about building your own CDN network. Why? Because it can be a smarter, more secure alternative to relying on commercial CDN solutions.

Here's the deal: dedicated servers are a great starting point for your CDN. They give you full control over how your content is distributed, help keep latency to a minimum, and make sure your service is up and running 24/7. Plus, over time, they can be a cost-effective option compared to many popular commercial CDNs.

Without Dedicated Servers

Let's be real—building your own CDN isn't just about setting up a few Points of Presence (PoPs) around the globe. Sure, without sufficient PoPs, higher latency, slower loading times, and a poor user experience are inevitable. However, that's only the tip of the iceberg—there are other critical challenges you need to consider.

- **Resource Competition:** Unoptimized shared infrastructure units, like virtual servers, often struggle to handle peak traffic, resulting in bottlenecks and downtime—two words no one likes to hear.
- **Security Concerns:** Shared environments expose content to vulnerabilities such as DDoS attacks and data breaches, posing severe risks to the continuity and safety of content delivery.
- **Increased Expenses:** Let's not forget the expenses. Relying on third-party CDN networks often means you're paying a premium. And those costs? They can add up fast.



With Dedicated Servers

With [Melbicom's distributed data center presence](#), you can build a CDN focused on high performance, reliability, and security. PoPs located closer to your audience help cut down latency and speed up load times by delivering content efficiently. Add GeoDNS into the mix, and traffic gets routed intelligently, giving users a super smooth and responsive experience.

Want to take your network to the next level? By integrating FastPath DNS Service (anycast), you can enhance your CDN setup even further. This technology ensures that DNS queries are resolved by the nearest and fastest server available, significantly reducing query response times and improving the overall user experience. Just like we at Melbicom offer FastPath DNS to our clients, you too can leverage this technology to create a faster, more resilient infrastructure tailored to your needs.

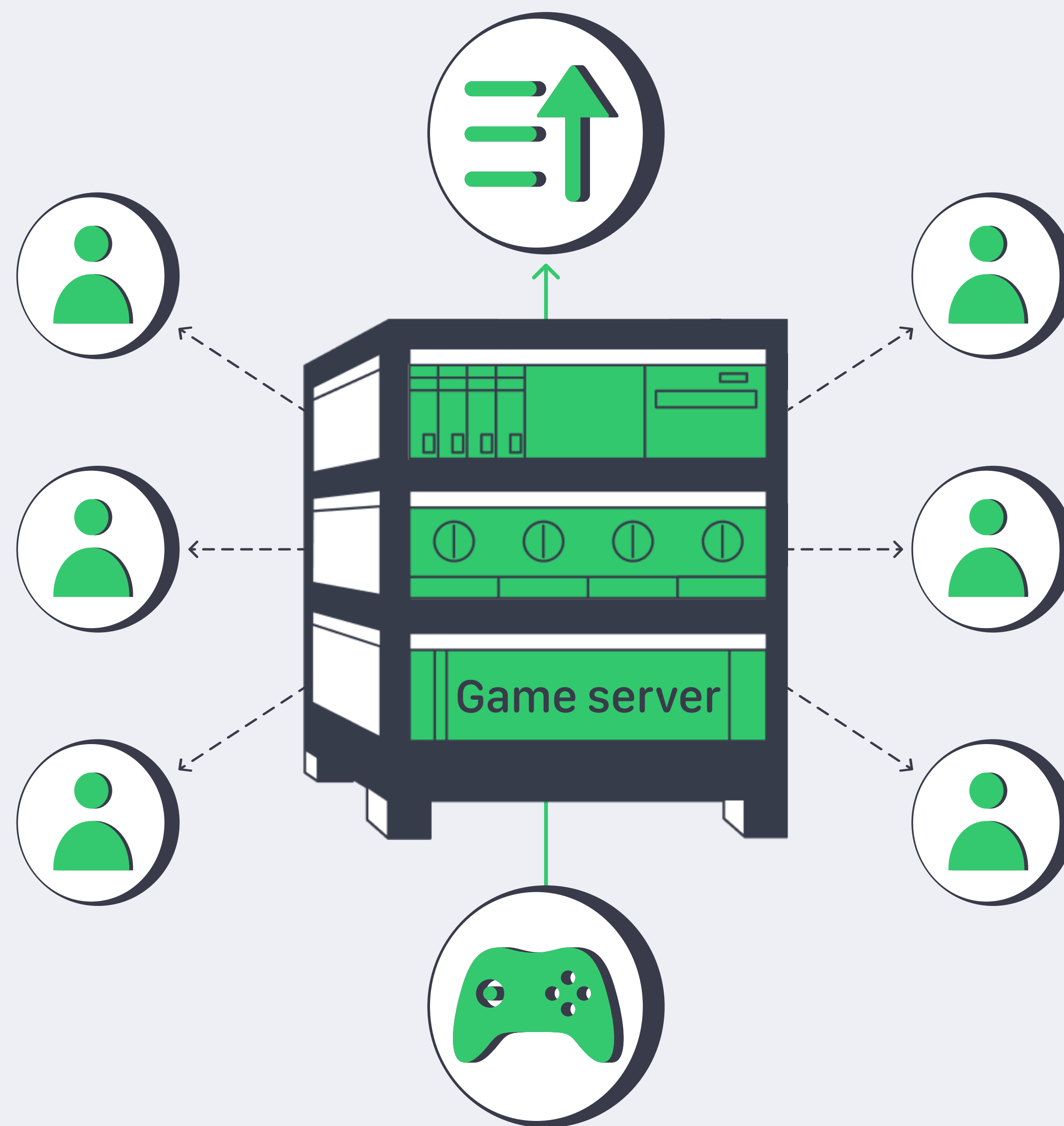
An important part: When thinking about the particular solution you will use, consider dedicated servers over VPS. You get exclusive access to resources—no sharing of CPU, RAM, or bandwidth with anyone else, which means no bottlenecks slowing you down. Plus, advanced security features like firewalls, DDoS protection, and SSL certificates give you peace of mind knowing your data is safe.

The best part? Dedicated servers let you scale and manage resources with precision, so your infrastructure matches actual demand. This means you're keeping things running smoothly and staying cost-efficient.

Requirements

Component	Recommendation
Data Center	Multiple geographically diverse data centers to ensure resilience against regional disasters
CPU	Multi-core processors like Intel Xeon for optimal performance
RAM	Minimum 128 GB for efficient content caching and handling high traffic volumes
Storage	NVMe SSD for high-speed read and write operations, ensuring fast content delivery
Bandwidth	Multiple gigabit connections for high throughput, especially during peak times

Choosing dedicated servers for your CDN network ensures top-notch performance, reliability, and scalability. With Melbicom, you gain access to a global infrastructure built on [the best dedicated servers](#) located in Tier III and Tier IV data centers. This setup guarantees seamless content delivery, robust security, and complete control over your configuration—perfect for handling high traffic, ensuring low latency, and maintaining exceptional uptime.



Dedicated Servers for Game Hosting

As global gaming revenues soar, individuals and organizations alike are exploring game hosting opportunities. For commercial ventures, dedicated servers offer a chance to build scalable, profitable infrastructures for popular titles like Minecraft or Counter-Strike 2. On the other hand, non-commercial users—such as passionate communities and hobbyists—see dedicated hosting as a way to ensure stable and customizable environments for their favorite games. Regardless of intent, the motivations are clear: better performance, independence from unreliable hosting options, and the ability to tailor server configurations to specific needs.

Without Dedicated Servers

Imagine a bustling online world brought to a screeching halt because the server hosting it couldn't keep up. That's the reality for many game environments relying on budget VPS or non-dedicated hosting solutions. While the initial costs might seem attractive, they conceal a minefield of issues waiting to disrupt gameplay and frustrate users.

- **Performance Bottlenecks** are the first hurdle. Shared hosting environments struggle to balance resources, leading to lag and disconnections—a death knell for player satisfaction. The gameplay becomes a jittery mess, and the host's machine often fails to handle even moderate loads.
- **Scalability Constraints:** Many VPS setups are ill-equipped to grow alongside expanding communities. Pre-configured limits on resources often cap the number of players and restrict seamless server upgrades.
- And then there's **Host Dependency**. Imagine logging into a world that vanishes every time the host decides to log off. This isn't just inconvenient; it makes game worlds feel temporary and unreliable, driving players away.



With Dedicated Servers

Dedicated servers rewrite this narrative entirely. Consider performance: with hardware resources exclusively at your disposal, the server hums along smoothly, free of interruptions or the dreaded "noisy neighbor" effect. Gameplay is fluid and satisfying.

When communities expand, the solution isn't a painful migration or sacrificing players' experiences. Dedicated servers scale with ease, welcoming growth by simply upgrading resources or integrating additional nodes. The players feel the difference, not the strain.

And that host dependency? It disappears. With a dedicated server, the game world exists independently of any single player. Always on, always ready. Administrators gain full control, shaping the environment to fit their vision—from enabling mods to implementing top-tier security measures. This level of autonomy isn't just a technical upgrade; it's a transformative experience for communities.

Requirements

Component	Recommendation
CPU	High-frequency processors (e.g., Intel Xeon E-series)
RAM	Minimum 32 GB for standard setups; 64 GB+ for larger communities
Storage	NVMe SSDs for fast data access and load times
Bandwidth	1 Gbps or higher to handle concurrent connections
OS	Windows Options

For newcomers, these baseline configurations ensure smooth performance for most games. As player counts or server demands rise, scaling specifications becomes essential. Among cost-effective options, [Melbicom's dedicated servers](#) stand out. With customizable setups and robust infrastructure, they offer a reliable backbone for hosting projects of any scale, and flexibility ensures that as communities grow, dedicated server performance scales seamlessly.



Dedicated Servers for Blockchain and Crypto Masternode Hosting

The ever-growing interest in blockchain, particularly for financial transactions, is driving the need for infrastructure that's both robust and reliable. Blockchain apps, especially those using crypto masternodes, are resource-heavy. They require significant computational power, ample storage, and high network availability to run smoothly.

Dedicated servers are built for this kind of workload. They provide the performance and control needed to handle resource-intensive blockchain operations, ensuring businesses can keep up with the increasing demands without compromising reliability.

Without Dedicated Servers

Masternode hosting requires extensive CPU resources to handle various network tasks and cryptographic operations. However, that's not the whole story—this use case comes with its own unique challenges:

- **Storage Requirements:** Masternodes often store a copy of the entire blockchain, which can grow significantly over time. Efficient storage solutions are crucial to manage this growing data effectively.
- **Network and Security:** Masternodes require constant network connectivity to validate transactions and maintain network stability. Ensuring security against attacks, such as DDoS, is vital to protect the blockchain network.
- **Scalability:** As the number of masternodes and blockchain users grows, businesses need infrastructure that can scale seamlessly to handle the increased workload.



With Dedicated Servers

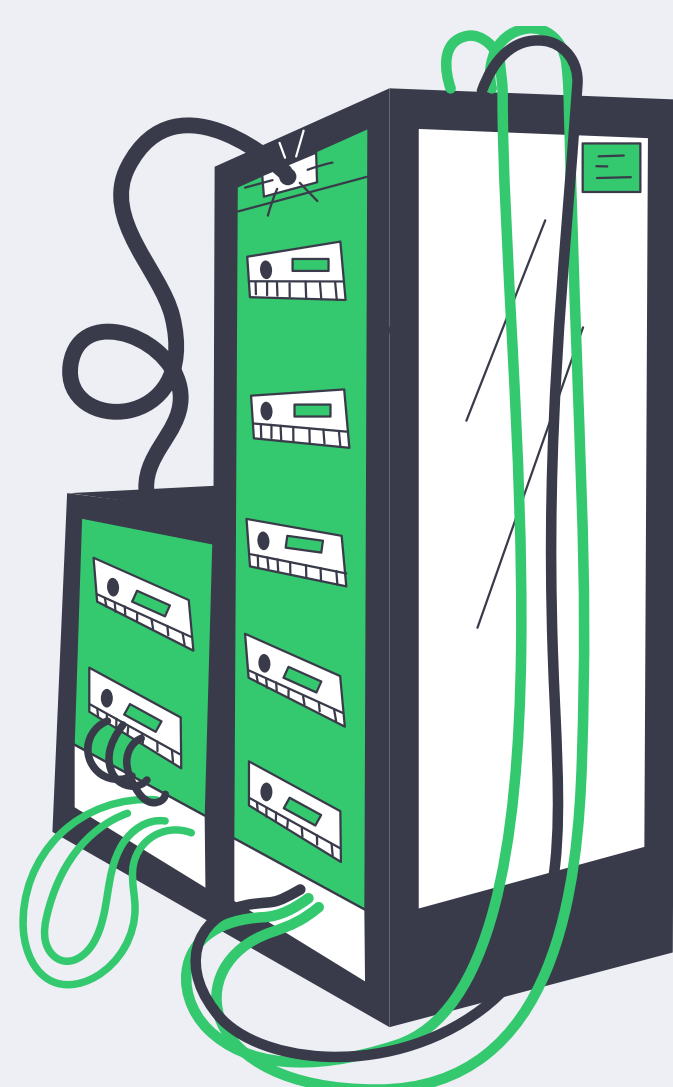
Dedicated servers offer exclusive resources, optimized performance, and exceptional reliability—exactly what's needed for blockchain applications. With guaranteed CPU, RAM, and bandwidth dedicated solely to your workload, resource contention is eliminated, ensuring smooth node performance. Equipped with powerful multi-core CPUs, they handle cryptographic operations effortlessly, while high-speed NVMe disks with a sufficient amount of storage meets the growing data demands of blockchain expansion.

Network security is another key advantage. Dedicated servers include advanced features like DDoS protection and customizable firewalls, keeping blockchain operations secure. And when demands increase, scaling is simple—add additional RAM or storage to keep up with increasing demands smoothly. This balance of control, security, and scalability makes dedicated servers an ideal solution for hosting crypto masternodes.

Requirements

Component	Recommendation
CPU	Use high-performance CPUs with multiple cores to handle cryptographic calculations
RAM	Start with at least 64 GB, depending on the blockchain application requirements
Storage	Leverage NVMe SSDs for fast read/write speeds to manage growing blockchain data efficiently
Bandwidth	Ensure high bandwidth and constant connectivity for smooth blockchain operation and transaction validation

Year after year, Melbicom continues to set the standard for **dedicated servers in crypto masternode hosting**. From delivering unmatched performance across all hardware configurations to ensuring the highest levels of security and scalability, our dedicated servers are built to empower blockchain applications at every level. Whether you are expanding your blockchain infrastructure or optimizing masternode performance, Melbicom provides the robust foundation you need to thrive.



No matter your business application, Melbicom's dedicated servers offer the performance, flexibility, and reliability you need. Explore our configurations today or contact us for expert guidance to find the perfect server solution for your unique needs.

Rent a dedicated server



Key Technical Specifications for Dedicated Servers

Choosing the right dedicated server for your business is an important decision, it requires a clear understanding of your requirements and the technical details that matter most. Luckily, Melbicom make the process straightforward, offering [pre-configured options](#) or the flexibility to customize your server with an easy-to-use configurator. In the following sections, we'll break down the key factors to consider: CPU, RAM, storage, bandwidth, and the operating system to install.

CPU (Central Processing Unit)

The Central Processing Unit (CPU) is the powerhouse of any dedicated server, executing tasks, processing data, and enabling seamless application performance. Choosing the right CPU for your server requires careful consideration of workload demands.

Without Dedicated Servers

When navigating through terms like cores, gigahertz, and cache, users often wonder: What's the better option? High core count or high clock speed? The answer, of course, depends on your workload. To help you decide, here are some key insights:

- **Number of Cores:** CPUs with multiple cores are essential for multitasking and parallel processing. More cores enable your server to handle simultaneous operations, making them ideal for hosting multiple applications or managing virtual machines.
- **Clock Speed:** Measured in GHz, higher clock speeds improve the performance of single-threaded tasks. This is particularly important for applications that prioritize quick execution over multitasking.

- **Cache Memory:** A larger cache allows the CPU to store frequently accessed data closer to the processing unit, reducing latency and improving overall speed. Cache sizes vary across CPU models, so understanding your workload's data access patterns can guide your choice.

Single vs. Multi-CPU Servers

As the demands on servers grew more diverse, hardware manufacturers responded by developing flexible solutions tailored to different needs. Single CPU servers and multi-CPU systems evolved concurrently, each addressing specific challenges—from cost-effective general-purpose tasks to high-performance workloads requiring parallel processing.

- **Single CPU Servers:** These are cost-effective and sufficient for general-purpose applications like hosting websites, running databases, or managing email servers. Modern single CPUs often have multiple cores and high clock speeds, providing a balanced mix of performance and affordability.
- **Multi-CPU Servers:** For enterprise-level applications, Multi CPUs multiply the processing power, enabling the server to handle extensive multitasking and data-intensive operations. Use cases include AI workloads, real-time analytics, and managing large-scale virtual environments. Multi CPUs also offer better fault tolerance, as tasks can be distributed between processors.

Exploring CPU Generations

Intel Xeon processors, celebrated for their reliability and outstanding performance, have long stood as a benchmark in the dedicated server industry. Melbicom offers a diverse selection of servers built on this trusted technology, ensuring a range of options tailored to meet your specific needs. Below, we break down the available Intel Xeon configurations to help guide your decision.

- **Xeon E-Series:** Designed for entry to mid-level workloads, these processors feature high clock speeds and moderate core counts. For example, the Xeon E-2246G (3.60 GHz) delivers excellent single-threaded performance, making it ideal for hosting applications, small databases, and development environments. The E-Series is often chosen for its balance of cost and efficiency.
- **Xeon E5-Series:** A versatile option for more demanding tasks, these processors come with higher core counts and support dual-CPU configurations. The E5-2630 V3 (2.40 GHz) is well-suited for virtualization, while the E5-2640 V4 (2.40 GHz) supports advanced multitasking with large-scale memory and storage integration.
- **Xeon Gold and Platinum:** These represent the top-tier Xeon processors, designed for enterprise applications and high-performance computing. The Xeon Gold 6248R (3.00 GHz) features advanced scalability and massive core counts, making it a powerhouse for AI workloads, data analytics, and large-scale enterprise solutions.

Now that you understand the basics of processors, put your knowledge to the test on [Melbicom's dedicated server page](#). Use the component filters or configurator to see how your processor choice impacts other components. Unsure if a processor fits your project? Reach out via the contact form for expert, tailored advice.



RAM (Random Access Memory)

When your server lags or fails to handle traffic spikes, the culprit often lies in insufficient RAM. Memory is a crucial component of any dedicated server, determining how efficiently it can run applications, process data, and respond to user requests. Selecting the right RAM configuration ensures your server can meet your performance goals both today and as your demands grow. Let's delve into the common questions about server memory to guide you in making a decision.

Understanding Modern Server RAM Options

Choosing RAM begins with understanding its core functions and how different types impact server performance. Here's what you should know about modern server RAM:

- **DDR5 RAM:** The emerging standard in server memory, DDR5 offers significant improvements in speed and efficiency. Operating at speeds of 4800 to 6400 MHz, DDR5 is optimized for multitasking and high-demand workloads. However, DDR4 remains a widely used and reliable option in many server configurations.
- **ECC RAM (Error-Correcting Code):** ECC memory is designed for servers where reliability is paramount. By detecting and correcting common data errors, it ensures data integrity and reduces the risk of system crashes—a must-have for critical applications like databases and financial systems.
- **RDIMM (Registered DIMM):** RDIMM modules include a register that stabilizes electrical signals, allowing for higher memory capacities. These modules are widely used in enterprise-grade servers for their balance of capacity and performance.
- **LRDIMM (Load-Reduced DIMM):** Ideal for high-density servers, LRDIMM reduces the electrical load on the memory controller, enabling configurations with massive amounts of RAM. This is the go-to choice for virtualized environments and cloud computing.

Why Server RAM Size Matters

The amount of RAM you choose directly influences your server's ability to handle traffic, run applications smoothly, and perform complex operations. Here are some common scenarios and recommendations:

- **Ecommerce or High-Traffic Sites:** Online stores and content-heavy websites benefit from 64 GB of RAM and more, which provides the capacity to handle traffic spikes and manage resource-intensive plugins or extensions.
- **Data Processing and Media Servers:** Workloads involving heavy data queries or video streaming services require 64-128 GB of RAM. This ensures quick data retrieval and uninterrupted service during peak hours.
- **High-Performance Computing (HPC):** For tasks like AI, machine learning, or big data analytics, 128 GB or more is necessary. These applications demand substantial memory for handling complex algorithms and massive datasets.
- **Virtualization and Cloud Applications:** For hosting multiple virtual machines (VMs) or containers, 64-128 GB of RAM is recommended. Each VM requires dedicated memory to operate without degrading overall performance.

Common Questions About Server RAM

How much server RAM is too much?

While adding more RAM can boost performance, excessive amounts that go unused inflate costs. Regularly monitor usage to track memory demands and identify bottlenecks. Choose a config that aligns with current needs but can also scale as workloads grow.

Can I upgrade server RAM later?

Yes, most servers allow for scalable memory configurations. Start with a moderate amount and expand as your requirements increase. Just ensure your dedicated server config support the upgrade.

Does server RAM speed matter?

Faster RAM improves data transfer rates, but the difference is most noticeable in memory-intensive tasks. Pairing DDR5 modules with compatible CPUs ensures optimal dedicated server performance.

With the right RAM setup, your server becomes a reliable powerhouse capable of handling diverse workloads. Melbicom's wide selection of [dedicated server options](#) and its configurator make it easy to adjust your setup to accommodate changes in your operational requirements.



Server Storage

When it comes to dedicated servers, storage is more than just a place for data. It's the engine that drives your apps, processes your requests, and ensures the seamless flow of operations. Choosing the right storage is crucial for performance, reliability, and scalability. But where do you start, and how do you make sense of all the options? Let's dive in.

Understanding Storage Types

A foundational question many ask is: What kind of storage should I choose? The answer lies in your priorities—whether it's cost, speed, or reliability.

- **SATA Drives:** These cost-effective drives are great for archival storage or applications that don't require intensive read/write operations. If you're managing large-scale backups or running basic file servers, SATA drives are a sensible choice.
- **SAS Drives:** Offering higher speeds and better reliability than SATA, SAS drives excel in high-demand environments like databases, ERP systems, and terminal servers. They strike a balance between performance and durability.
- **SSD (Solid-State Drives):** SSDs are increasingly the go-to option for modern workloads. Their lack of moving parts translates to faster data access and greater durability. Applications that demand high I/O performance, such as content management systems, thrive with SSDs.
- **NVMe SSDs:** At the pinnacle of storage technology, NVMe SSDs leverage PCIe lanes to deliver unmatched speed and efficiency. For example, transferring a 30GB file takes mere seconds. If your priority is raw performance—think real-time analytics or high-traffic ecommerce—these are your best bet.

Why Multiple Drives Matter

One common query is whether it's better to invest in a single large drive or multiple smaller ones. Here's the expert take: multiple drives often win out, as each disk has read/write limits. Spreading workloads across several drives reduces bottlenecks. For instance:

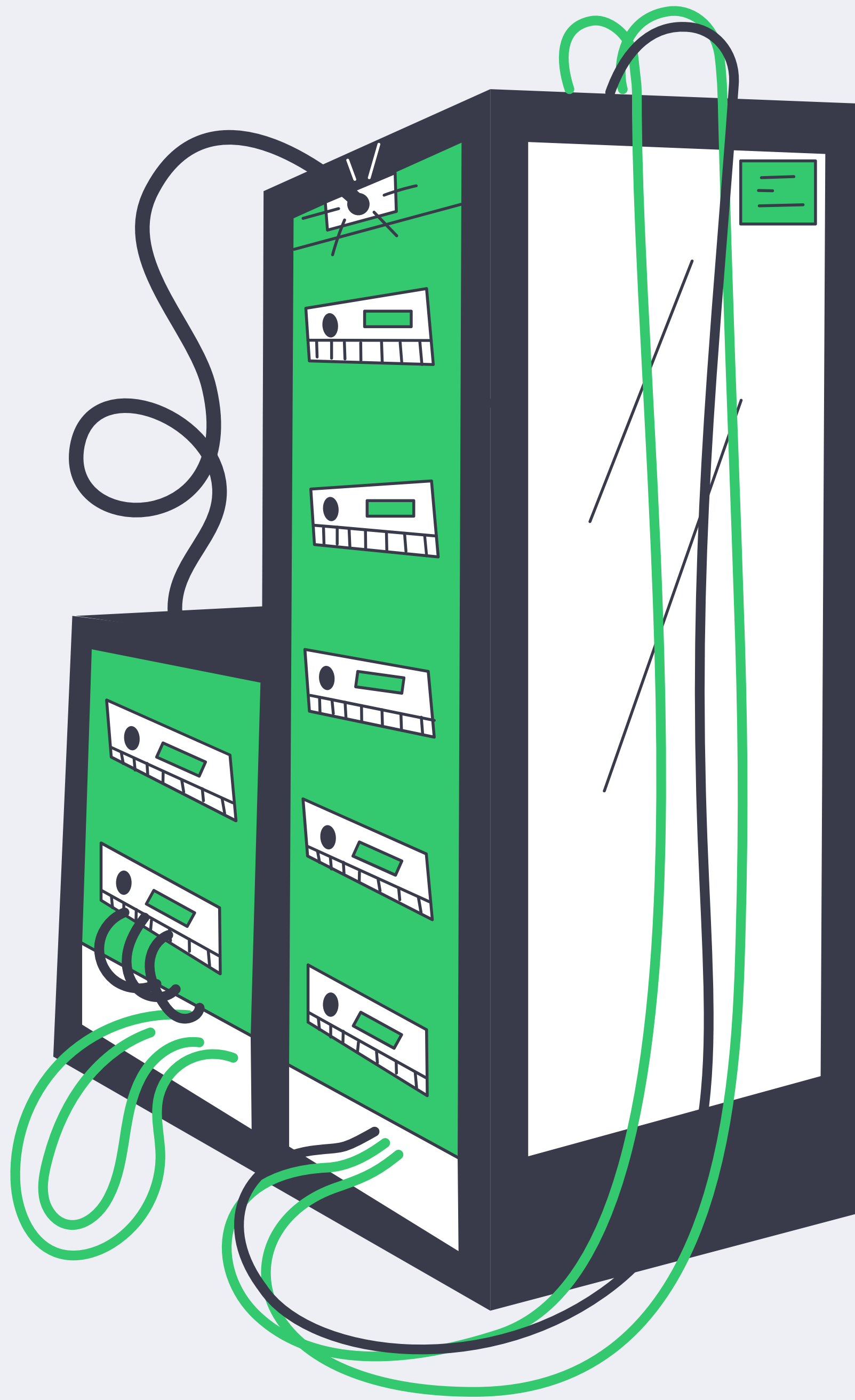
- **Redundancy and Reliability:** By using multiple disks in RAID configurations (like RAID 1 or RAID 10), you can ensure that data is mirrored or striped for both backup and faster access. This means the failure of a single disk won't bring your operations to a halt.
- **Dedicated Functions:** It's often wise to allocate a primary drive for the operating system and additional drives for data and applications. This division prevents one task from throttling the entire system, especially during peak usage.
- **Enhanced Performance:** Imagine a high-traffic website where a spike in visitors coincides with a scheduled backup. A single disk may choke under the load, but splitting tasks across two or more drives ensures smooth performance.

Common Questions About Server RAM

Storage isn't a one-size-fits-all decision. Whether you're managing backups, running high-performance applications, or supporting a high-traffic website, tailoring your setup is essential. Here are the key questions you'll want to answer:

- **How important is speed to your application?** If speed is paramount, NVMe SSDs are the gold standard, but they come at a premium.
- **What about redundancy?** For data-critical applications, RAID setups are non-negotiable. They provide peace of mind and operational continuity.
- **What's your budget?** While SSDs and NVMe SSDs offer superior performance, they're pricier than SATA and SAS options. Balancing cost and performance is key.
- **Do you plan to scale?** Ensure your server's CPU and motherboard can accommodate future storage upgrades. Older configurations may limit your options.

With [Melbicom's selection of 100s of dedicated servers](#) offering diverse storage configurations, you can design a system that evolves with your needs, ensuring both reliability and performance.



Bandwidth and Network Connectivity

Bandwidth is the backbone of your server's ability to handle data transfer, while network connectivity ensures that these transfers occur with speed and reliability. Choosing the right bandwidth setup is crucial for maintaining a seamless user experience and accommodating growth over time.

Understanding Your Bandwidth Requirements

Understanding your bandwidth needs begins with analyzing your application. A small website might need just 1-2 TB of bandwidth per month, while a video streaming service could require 50 TB or more. Melbicom offers tiered bandwidth plans to match different usage patterns, so you can choose one that aligns with your traffic. Regularly monitoring bandwidth usage with analytics tools helps track trends and plan for growth effectively.

Avoiding Bandwidth Pitfalls

Another common concern is exceeding bandwidth limits. Some providers offer flexibility with burst options to handle temporary surges, while others may charge additional fees. To avoid unexpected costs, ensure you understand your provider's policies. For example, "unlimited" bandwidth often comes with fair usage policies, so reviewing the terms is crucial to ensure there are no hidden throttling mechanisms or caps.

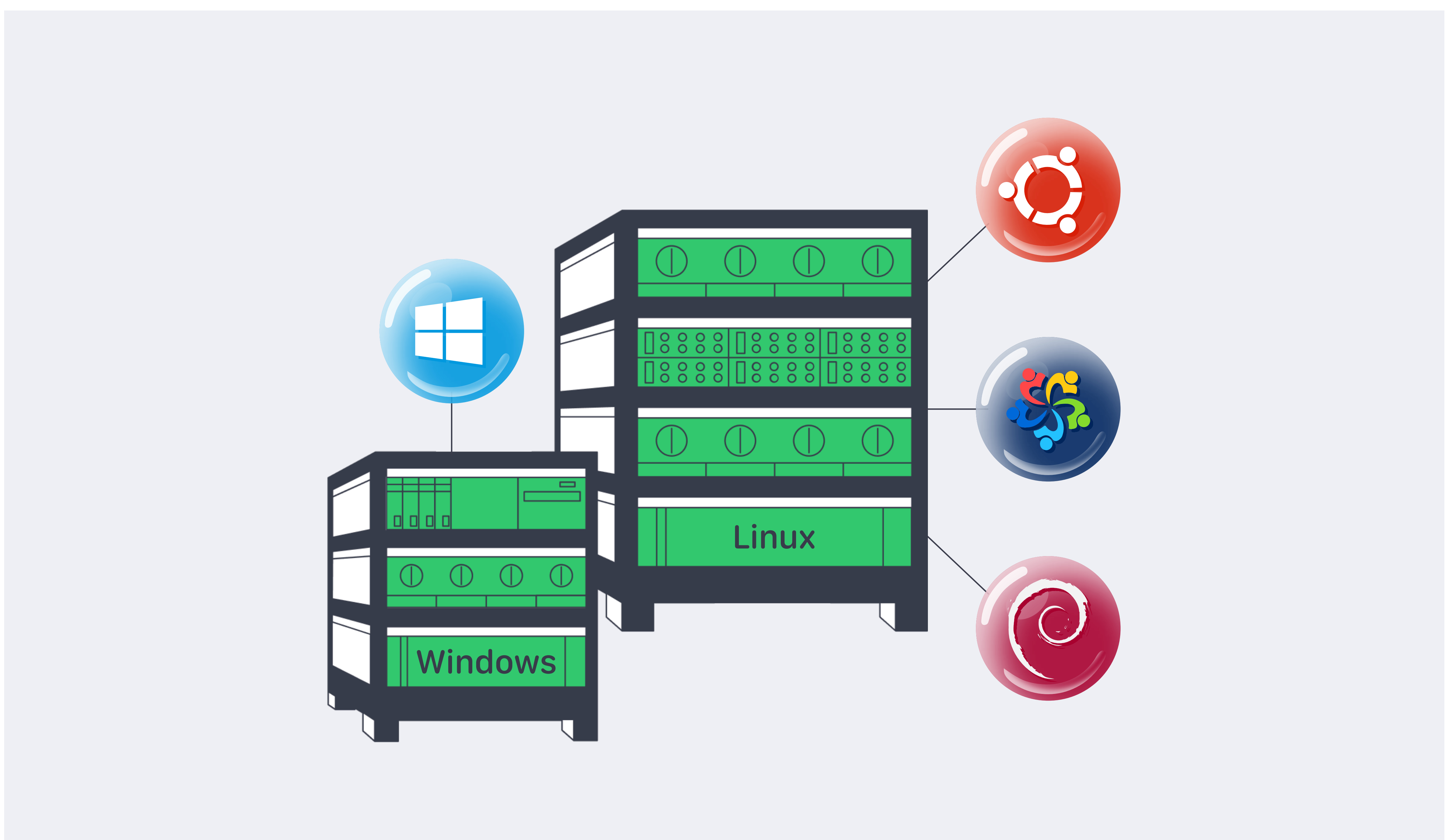
Older server hardware may lack support for advanced bandwidth configurations, such as quad 10Gbps connections, which can limit scalability. If your application requires high-speed uplinks or frequent data transfers, make sure your server hardware is up to the task. High-traffic websites, video platforms, media asset repositories, and SaaS applications especially benefit from robust bandwidth setups.

Bandwidth Strategy Optimization

Optimizing bandwidth is essential for maintaining a responsive and reliable server. To achieve this, businesses should focus on three key strategies:

- Monitor usage regularly with analytics tools to track consumption and identify potential bottlenecks. Plan for growth by choosing scalable bandwidth plans that accommodate increasing traffic and data demands.
- If available, leverage burstable options for occasional traffic peaks, providing a cost-effective way to handle surges without overcommitting to higher-tier plans.

Melbicom simplifies bandwidth selection with customizable options and robust network infrastructure. Whether you're running an ecommerce website, host an on-premises CRM system, or managing a high-traffic SaaS application, our [dedicated server plans](#) ensure your data moves quickly and reliably—even during peak times.



Operating System

When choosing a dedicated server, one of the most impactful decisions you'll face is selecting the operating system. This choice is not merely about preference; it shapes how your server performs, what apps it can run, and how much maintenance it will demand.

The decision often splits between two major categories: Linux-based operating systems and Windows Server. Both offer distinct advantages and cater to specific needs, but knowing which aligns with your goals is key. While Linux dominates the server space with its open-source flexibility, Windows holds its ground for enterprise applications and compatibility with proprietary software. Let's delve deeper into these options to help you make an educated choice.

Linux-Based Operating Systems

Linux distributions dominate the server landscape due to their open-source nature, robust security, and flexibility. Popular choices include CentOS, Ubuntu, and Debian. CentOS has been a long-time favorite for its stability and support for enterprise-grade applications. However, with its deprecation, many users are shifting to alternatives like AlmaLinux and Rocky Linux, which continue CentOS's legacy of reliability.

Ubuntu, known for its user-friendly interface and extensive community support, is ideal for developers looking for versatility. Debian, one of the oldest Linux distributions, stands out for its stability and long-term support, making it a reliable choice for critical applications.

Linux is often preferred for hosting web servers, running databases, and supporting programming environments like Python, PHP, and Ruby. Its lightweight nature and minimal licensing costs make it an economical and powerful option for many businesses.

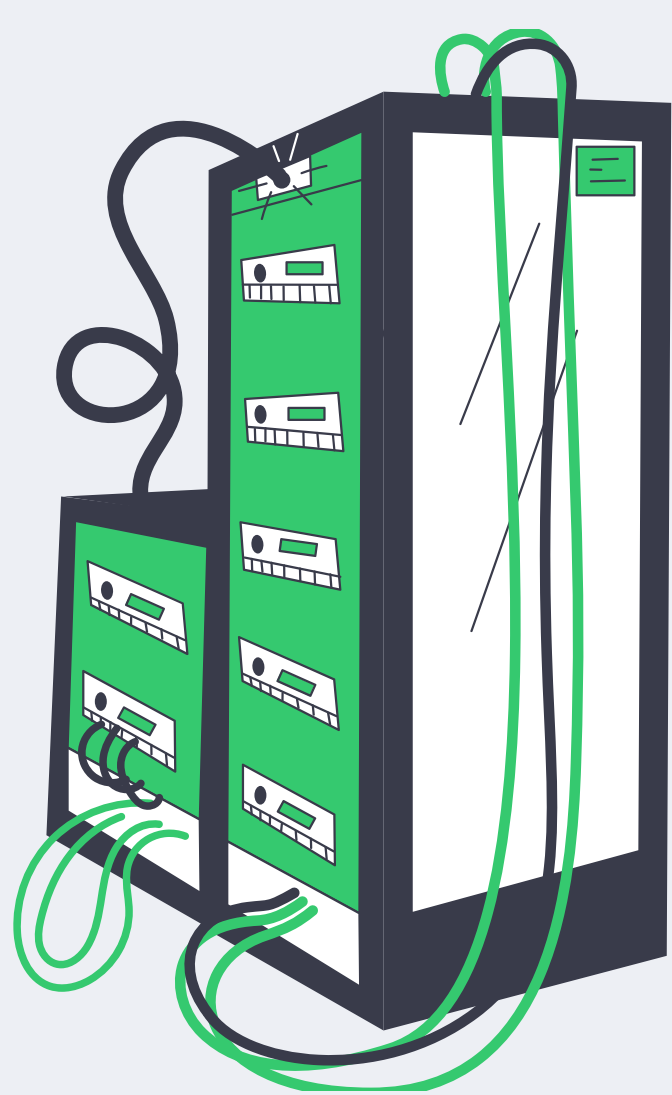
Windows-Based Operating Systems

Windows Server, with versions like 2025, 2022, and 2019 is another popular choice, particularly for organizations reliant on MS technologies. Windows servers shine when running apps requiring .NET frameworks, SQL Server, or Active Directory. They also offer a familiar GUI, which can be advantageous for admins accustomed to desktop environments.

Game hosting is another area where Windows Server excels. Many popular game servers are optimized for Windows environments, making it the go-to OS for hosting top titles.

Despite its strengths, Windows Server typically involves higher licensing costs compared to Linux distributions. However, its compatibility with a wide range of enterprise applications and tools makes it indispensable for many businesses.

Ultimately, dedicated servers provide the freedom to install and manage the operating system that best aligns with your project goals. Choosing the right operating system is not just a technical decision but a strategic one, ensuring a stable and efficient foundation for your server operations.



By carefully evaluating technical specifications and aligning them with your business goals, you can ensure your server is equipped to handle current workloads and scale with future demands. Melbicom offers 100s of configurations to help you find the perfect fit.

Rent a dedicated server



Pricing of Dedicated Servers

The pricing of your dedicated server reflects a combination of performance, scalability, and reliability. While budget-friendly options may seem appealing, underpowered hardware can lead to bottlenecks and increased operational costs over time. Investing in a modern, scalable server ensures you'll achieve the best return on investment (ROI).

Dedicated Server Pricing Tiers

- **Entry-Level Dedicated Servers (€80–\$160/month):** These servers are perfect for small websites, basic applications, or testing environments. They often feature older hardware or minimal configurations, designed to handle light workloads without breaking the bank. Startups or individuals operating on a tight budget will find these servers suitable, especially for projects with lower-tier performance requirements.
- **Mid-Range Servers (€160–\$500/month):** Striking a balance between affordability and performance, mid-range servers are ideal for growing businesses. These servers typically include modern CPUs, higher RAM, and SSD or even NVMe SSD storage, offering the versatility needed for medium-traffic websites, databases, or small-scale ecommerce platforms. Companies scaling operations or apps requiring moderate performance without exceeding budget constraints should consider this option.

- **High-Performance Servers (€500–\$1,500/month):** Built for demanding workloads, high-performance servers include top-tier CPUs and extensive RAM volumes. These configs minimize latency and maximize uptime, making them a go-to choice for virtualization, data analytics, and applications with heavy concurrent user loads. Enterprises managing high-traffic or data-intensive projects, as well as businesses that require reliable, infrastructure to ensure consistent performance, will benefit most from these servers.
- **Enterprise Dedicated Servers (€1,500+/month):** These setups often include redundant hardware, vast storage capacities, and top-tier network bandwidth. They also tend to meet the highest standards of security and compliance. Large organizations running mission-critical applications or companies that demand unmatched levels of performance and security will find these servers indispensable.

Additional Services Pricing

When budgeting for a dedicated server, it's not just the hardware that matters. Additional services, often overlooked, can significantly influence the final cost. From operating systems to advanced security measures, these extras are critical to optimizing performance, maintaining uptime, and safeguarding your data.

- **Operating System:** The choice of an OS is one of the first decisions you'll make—and it has direct cost implications. A Windows Server license, for example, ranges from €25 to €160 per month, with the Data Center Edition catering to enterprises at the higher end of the scale. By contrast, Linux distributions are typically free or come with nominal fees, making them attractive for businesses balancing functionality and budget.
- **CDN:** For businesses serving users across continents, speed is paramount. A CDN minimizes latency by caching content on geographically distributed servers, ensuring faster load times and a smoother user experience. [Melbicom's CDN service](#) is tailored for ecommerce platforms, media websites, and global applications, offering scalable pricing based on traffic volume and reach. It's a smart investment for businesses where milliseconds matter.
- **DDoS Protection:** In a world of rising cyber threats, DDoS protection is no longer optional for high-traffic websites or applications hosting sensitive data. [Melbicom's flexible DDoS protection plans](#) provide a shield against malicious traffic surges, keeping your server online even during an attack. Pricing scales with the level of protection required, making it an essential safeguard for businesses aiming to ensure continuity.
- **Storage and Backup Services:** Data loss can be devastating, but it's preventable with the right backup strategy. [Melbicom's SFTP backup service](#) offers encrypted, secure storage to protect critical files from accidental deletion, corruption, or cyberattacks. With flexible pricing based on data volume, this service is an indispensable layer of security for companies dealing with sensitive information or compliance requirements.

Together, these services form the backbone of a well-rounded dedicated server setup, ensuring not just optimal performance but also the security and scalability businesses need to thrive. Each additional cost is an investment in the reliability and future-proofing of your server infrastructure—a decision worth making carefully.



Future Trends of Dedicated Servers

In 2023, the dedicated server market stood at \$16.9 billion. By 2032, projections place it at a staggering \$81.49 billion—a transformation fueled by relentless innovation. A decade ago, 1 Gbps internet connections were the benchmark for top-tier server performance. Today, **10 Gbps ports have become mainstream**, with cutting-edge configurations reaching speeds of 40 or even 100 Gbps. These advancements are enabling servers to tackle the most demanding tasks, from AI training to real-time analytics, with remarkable efficiency.

Looking ahead, the pace of technological breakthroughs shows no signs of slowing. While predicting the full scope of changes over the next ten years is challenging, emerging trends offer a compelling preview of what's to come.

Edge Computing

As businesses prioritize reducing latency and improving user experiences, edge computing is becoming a cornerstone of server infrastructure. Dedicated servers are increasingly deployed at the network edge, closer to end-users, enabling faster data processing and response times. This trend is particularly impactful for industries like IoT, autonomous vehicles, and real-time analytics, where milliseconds matter. By placing servers near 5G towers, dedicated servers complement the high-speed, low-latency connectivity of 5G, making it possible to support demanding applications with performance and scalability.

Sustainability and Green Hosting

With global attention on climate change and environmental responsibility, the hosting industry is embracing sustainability. Dedicated server providers are adopting energy-efficient hardware, renewable energy sources, and innovative cooling solutions to minimize their carbon footprint. Green hosting practices not only reduce operational costs but also appeal to eco-conscious businesses and consumers. The push for sustainability drives innovation, from liquid cooling to AI-powered power optimization.

Enhanced Security Measures

As cyber threats become more sophisticated, the demand for secure dedicated server solutions is rising. Future advancements will likely focus on hardware-level encryption, AI-driven threat detection, and compliance with stringent data protection regulations. Businesses will increasingly turn to dedicated servers for their ability to provide isolated and secure environments compared to shared hosting alternatives.

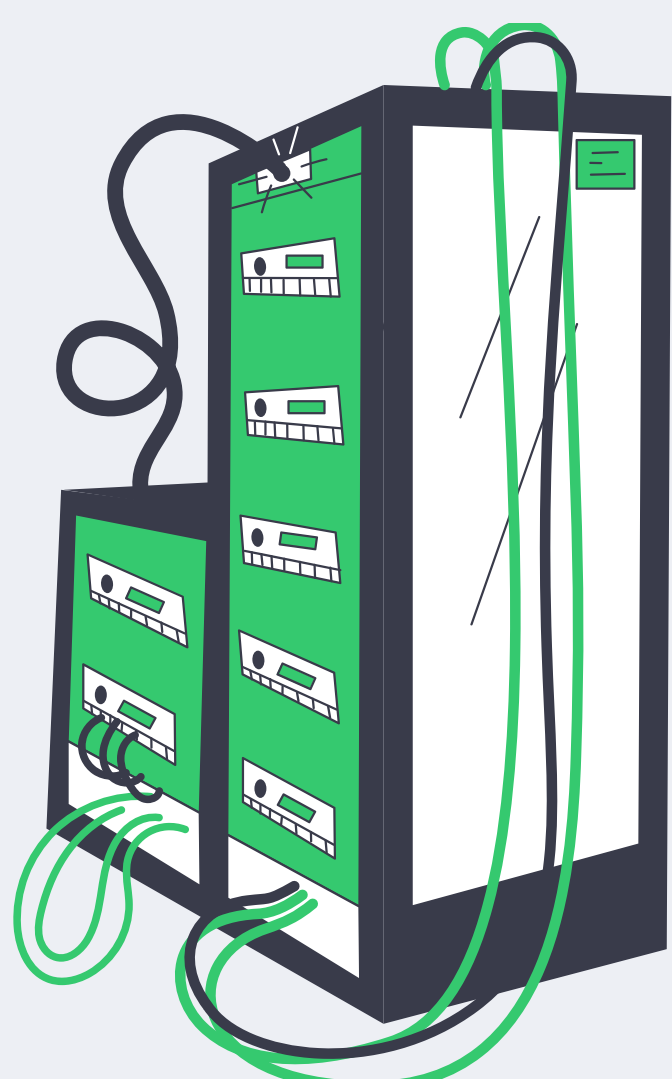
AI and Machine Learning Integration

Artificial Intelligence and Machine Learning are reshaping server management and optimization. Dedicated servers are being equipped with AI-driven tools to monitor performance, predict hardware failures, and automate routine maintenance. This reduces downtime, improves efficiency, and enhances the overall user experience. Furthermore, businesses deploying AI and ML workloads benefit from the robust computational power.

Hybrid Cloud Integration

The line between dedicated servers and cloud services is becoming increasingly blurred. Businesses are adopting hybrid models that combine the reliability of dedicated servers with the flexibility of cloud computing. This trend allows organizations to balance performance and cost while ensuring data redundancy and scalability.

The future of dedicated servers is nothing short of thrilling. Breakthroughs in edge computing, sustainability practices, AI, and hybrid cloud solutions are redefining how businesses interact with their infrastructure. At [Melbicom](#), we embrace these innovations not only as a technological challenge but as an opportunity to empower our clients with resilient, future-ready solutions. By staying at the forefront of these developments, we aim to help businesses tackle the complex demands of today while preparing for the transformative opportunities of tomorrow.



Ready to unlock the full potential of a dedicated server for your business? Let us help you choose the perfect solution tailored to your needs.

Contact us today

Key Takeaways

As you can probably tell, we are passionate about all things hosting and love sharing our expertise in hosting services. We hope this dedicated server guide was helpful and that you've picked up a few tips to apply to your infrastructure projects. If so, please take a moment to share it. And below, you'll find a cheat sheet with a few key takeaways.

1. A dedicated server is a service offered by hosting providers. It involves renting a physical server housed in a data center, fully equipped with the infrastructure needed to ensure reliable performance and internet connectivity.
2. Opting for a dedicated server in a data center simplifies server management. You don't have to worry about keeping hardware running, managing power supplies, or maintaining network connections. This makes scaling easier, improves reliability, and adds an extra layer of security compared to handling everything on your own.
3. VPS hosting works well for small or flexible projects, but when performance and control matter most, dedicated servers take the lead. They're perfect for businesses running resource-intensive projects, offering the unmatched power and predictability.
4. Managed dedicated servers come with expert support to handle updates, security checks, and technical issues. This lets businesses focus on their goals while someone else takes care of the tech. For those who prefer full control, unmanaged servers offer freedom to customize everything—but with less support when things go wrong.
5. Dedicated servers can be customized for almost any purpose, whether it's running ecommerce sites, SaaS platforms, or AI tools. Picking the right mix of CPU, RAM, storage, and bandwidth ensures smooth performance and room to grow.
6. The hardware inside a dedicated server is just as important. Powerful processors, fast SSDs, and strong network connections aren't just specs—they're what make a server fast and reliable. Choosing the right setup means your server will handle tasks efficiently and keep users happy.
7. Your choice of operating system also makes a big difference. Linux systems like Ubuntu and CentOS are popular for being flexible, stable, and budget-friendly. Windows Server is a great fit for businesses using tools and applications running exclusively on this OS. The key is picking what works best for your applications and team.
8. The cost of a dedicated server depends on what you need—better hardware, extra support, and location can all impact the price. Entry-level servers work for smaller needs, while high-end options are built for big workloads. Knowing what you're paying for helps you find the right fit without overspending.
9. Melbicom offers extras like stronger DDoS protection, custom firewalls, or advanced storage setups. These options let you fine-tune your server to meet specific security needs or boost performance, making it an even better match for your business.