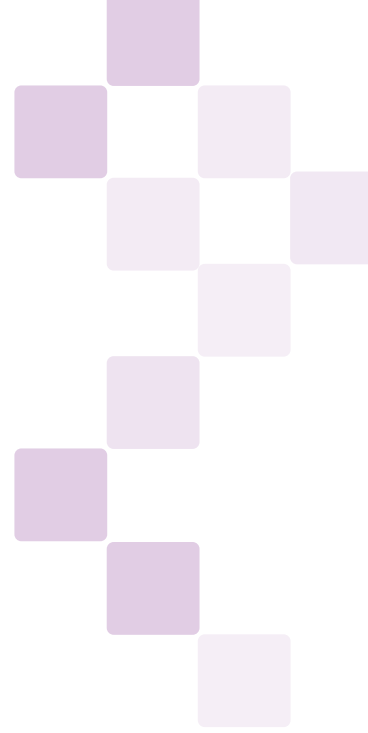# 10 Must-Have Skills to Be the Best Data Center Manager

Sunbird®
DCIM that's easy, fast, and complete.

Introduction

Data centers are a critical component of modern organizations. They must be managed and monitored properly to provide the business critical and online services that have become so ingrained into nearly all aspects of modern life.

Behind each data center is a data center manager that is responsible for maintaining the uptime and availability of these services while meeting corporate sustainability objectives and increasing the efficiency and productivity of their staff and resources.

To successfully achieve these objectives while keeping up with the ever-increasing demand of data center services and complexity of data center environments, data center managers need a wide-ranging technical and interpersonal skillset.

As a global leader in Data Center Infrastructure Management (DCIM) software, we've had the pleasure of collaborating with hundreds of the best data center managers in the world who actively participate in our user group program. Over many years, we have found that they possess common traits that separate them from their peers.

In this eBook, you will learn ten must-have skills that the most successful data center managers demonstrate daily. Use this information to fill any gaps in your skillset and put yourself on the path to being a topflight data center manager.

10 Must-Have Skills to Be the Best Data Center Manager

Data Center Facilities Infrastructure and Systems

#1

To manage a data center at the highest level, you need to have a deep understanding of the infrastructure and systems that data centers are comprised of and how they work together.

You should be familiar with:

- Server racks
- Servers
- Networking equipment (i.e., routers and switches)
- Storage equipment
- Power infrastructure (i.e., rack PDUs, busways, remote power panels, floor PDUs, branch circuits, UPSs, generators, fuel tanks, transformers, switchgear, switchboards, ATS, panelboards, DC plants, and DC bays)
- Environmental sensors (i.e., temperature, humidity, water, smoke, airflow, and air pressure)
- Structured, patch, and power distribution cabling
- Cooling equipment (i.e., CRACs/CRAHs, cooling towers, and chillers)
- Security equipment (i.e., electronic door locks and cameras for compliance with privacy laws such as the European Union's GDPR)
- Local building and construction codes
- Fire suppression systems
- Audits and reporting

? DID YOU KNOW?

In a typical data center, the energy needed to cool the IT equipment could be upwards of 30-40% of the total operational cost. It is therefore the biggest target for improving efficiency and sustainability, especially if you're still overcooling the data center.

FROM THE EXPERT:

"Sunbird simplifies and manages where everything is located and how it connects with the data center environment across the enterprise. It gives you a very good overview of everything going on within your data center in one single application."

EMERSON Kyle Kohne

Read the case study

Project Planning and Management

#2

Data center projects can come in many forms such as migrations, consolidations, new site or cabinet buildouts, network connectivity installations, and hardware refreshes. However, no matter the project, the best data center managers have excellent project planning and management skills that give their projects a high success rate.

Project management skills you must have include:

- Fully understanding the requirements
- Developing a clear strategy
- Gaining maximum contribution from all staff
- Gaining buy-in from project stakeholders for maximum support
- Proactively managing risk by predicting potential negative outcomes and creating an action plan to prevent failure
- Completing projects on time, on budget, and to the highest quality

Many data center managers struggle to efficiently manage projects from creation to completion. Even the most experienced experts cannot avoid the pain of swivel chair interfaces. They need to copy and paste information between a multitude of spreadsheets, online forms, ticketing systems, and project management tools to keep projects moving and track their status. This process is manual and error-prone.

The best data center managers use DCIM software with infrastructure project management capabilities to consolidate tools and workflows. This enables data-driven collaboration and improved planning to help ensure every project is completed on time and on budget.

? DID YOU KNOW?

70% of all projects fail to deliver what was promised but implementing a project management process reduces the failure rate to 20%.

👤 FROM THE EXPERT:

"The more tools and processes we can consolidate and move into dcTrack, the less swivel chair will be required between all these tools, and we can become more efficient and streamline all our processes."

COMCAST   Chris Heaton   Watch the video

Data Analysis and Presentation

#3

Modern data centers are packed with devices, meters, and sensors that generate a massive amount of data.

Gaining insights from this data provides a critical advantage that helps you maintain uptime and increase efficiency. However, many data center managers don't have the time or training to know how to collect that data, analyze it, and derive value from it. Outdated management tools like Excel and Visio are commonly used, but they are not designed for data centers and it's an arduous task to use them for data center analytics.

The best data center managers use second-generation DCIM software that features zero-configuration analytics. The software automatically collects, stores, trends, and reports on the data your devices generate and transforms that data into actionable insights such as when you are about to trip a circuit breaker and create potential downtime, where you may be running out of capacity or where you have additional stranded capacity, how well you are progressing towards sustainability goals, and the status of all work activity that is occurring in the data center.

Keeping your management and stakeholders aware of the latest status is important to demonstrate your progress on projects and easily make your case for purchasing more capacity. With 3D data center floor map reports and intuitive dashboard charts, DCIM software makes it easy to display your data center's health and capacity at a glance.

? DID YOU KNOW?

Modern enterprise-class DCIM software can collect over 11 billion data points a day to provide highly accurate information.

FROM THE EXPERT:

"dcTrack significantly reduces our effort in creating [data center capacity utilization] reports by automatically creating them and emailing them to my capacity management team when required."

PADDYPOWER. betfair   Peter Giles

Read the case study

Management of People and Teams

#4

Data center managers are typically generalists who work with many teams and individuals with more specialized skillsets. As such, the best data center managers have exceptional leadership skills to get the most out of their teams.

The most successful data center managers:

- Ensure all staff are trained on and using modern data center management tools
- Track the work activity in the data center by employee to ensure high productivity levels
- Coordinate the effort of various functional domains to ensure successful projects
- Get all team members to follow data center security policies and best practices
- Motivate team members to grow professionally

Managing people becomes easier when everyone has the same centralized view of all data center resources and follows the same documented processes. DCIM software provides clear port-level work orders to ensure that technicians always perform the job correctly the first time. Then, you can spend less time micromanaging and more time on strategic projects.

Acquiring data center certifications is an excellent way to develop professionally as a manager, boost your credibility, and fill the data center skills gap. Plus, they are often paid for by your organization. Consider getting a certification and encouraging your staff to do the same. See a list of the top data center certifications.

? DID YOU KNOW?

Companies with a highly engaged workforce are 21% more profitable and 17% more productive.

⚑ FROM THE EXPERT:

"Technicians can no longer just grab parts and go. They need to slow down and update the inventory before proceeding. This reinforces the need to track hardware and reminds the technicians that the assets need to be barcoded at the time of installation."

KPMG   Tom Wysocki

Watch the video

🌥 Sunbird®

Communication Skills

#5

The best data center managers are not just technically proficient but have strong interpersonal and communication skills. Since data centers are complex ecosystems of interdependent components and systems, being able to communicate about them is a required skill.

You should be able to explain technical information in a clear and concise manner that is easy to understand by staff, customers, and management that do not possess the same technical knowledge.

You also need to effectively relay the policies, procedures, and regulations that your data center staff must follow to ensure that all rules are adhered to.

Act professionally with everyone you work with and be respectful and motivating to get the best productivity from your team and others.

To facilitate cross-functional communication, leverage a data center management solution that integrates with other tools to enable a single source of truth. Then, previously siloed tools and teams can share a centralized view of what's happening in the data center that enables data-driven collaboration.

DID YOU KNOW?

Online collaboration tools facilitate increased productivity by up to 30%.

FROM THE EXPERT:

"We've created a Command Center Slack channel and a Command Center Teams channel. Anybody in our organization who wants to know the pulse of what's going on in IT can check those two channels. We've been working diligently on automating messages into those channels. Instead of our operations team having to manually type things in, we want alarms to automatically go in."

THE UNIVERSITY OF CHICAGO   **Raymond Parpart**

Watch the video

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System Integration and Automation

#6

For many data center managers, their daily tasks require many tools and a lot of manual effort. This routine is time-consuming and prone to human error. It results in low productivity that causes delays, inefficient use of resources that wastes money, morale issues, and even costly downtime.

The best data center managers don't waste time entering the same data into multiple systems and don't worry about inaccurate data. Instead, they leverage "automation via integration."

Automation via integration is achieved by deploying and integrating modern DCIM software solutions with out-of-the-box connectors that automatically populate data in the appropriate systems. The benefits include enabling a single source of truth, improved workflow and productivity, and more cross-functional collaboration around shared data.

Leading data center managers integrate their DCIM software with a wide variety of other tools including CMDBs, ticketing systems, Dev Ops tools, and BMS systems. Their automation use cases include provisioning and orchestration, virtual machine management, parts and spares management, server power budgeting, automatically scheduled charts and reports via email, business rules, and automatic email alerts of power and environmental threshold violations.

DID YOU KNOW?

When data is either not available or low quality, employees spend 75% more of their time on non-value-added activities.

FROM THE EXPERT:

"Say we didn't put a rack in our DCIM. If something is installed from the ops team, ServiceNow will actually go and tell our DCIM which cabinet and which U, and will automatically place the item in our DCIM when it's been input into ServiceNow."

ebay   Mark Jones

Watch the video

Flexibility and Adaptability to Change

#7

Data center management is constantly changing. New challenges are always appearing, but the best data center managers are able to quickly adapt to turn those challenges into opportunities to improve their operations.

For instance, COVID-19 caused a paradigm shift that required data centers to be managed remotely. Leading data center managers leveraged DCIM software to manage their data centers from home and reported that it was even better than being onsite.

Today, data center managers are under increased pressure to comply with corporate sustainability initiatives by intelligently reducing energy costs and increasing the efficiency of capacity utilization to get the most out of existing resources and defer costly new buildouts.

Yet there are still data center managers who rely on outdated tools and methods to monitor and manage their environments. Forward-thinking data center managers who adopt innovative solutions that enable them to make smarter decisions are gaining a massive competitive advantage.

For example, Comcast leverages Auto Power Budget, a DCIM software feature that automatically calculates an accurate power budget number for each server instance based on its actual measured load to get 40% more utilization out of their existing facilities. (Read the case study.)

? DID YOU KNOW?

eBay also uses Auto Power Budget to realize 33% more efficient use of existing cabinets. (Watch the video).

FROM THE EXPERT:

"We're building solar power farms and wind turbines, implementing free air cooling and cold aisle containment, and raising the minimum cold aisle temperature to save a lot of power... Sunbird provides the ability to measure, monitor, and document what is actually happening in our data centers. Then, we can implement things to keep the costs down."

vodafone   Andrew Marsh

Read the case study

Sunbird®

Vendor Management

#8

Many organizations outsource data center services such as colocation, managed hosting, remote hands, migration services, system integration, data center design and construction, and technical training. Outsourcing data center services provides data center managers the ability to scale quickly, avoid large capital expenses, and focus on more strategic projects.

As the demand for capacity continues to increase and organizations tighten their budgets, the amount of outsourced data center contracting is growing each year.

However, your data center is only as good as the people supporting it. The best data center managers have a thorough and documented prospective vendor vetting process that ensures that only the most qualified professionals have access to and responsibilities in their data center.

Mitigate risk by having vendors complete a competitive RFP process, ask for customer references, and read reviews and other material to gauge their industry reputation. Be sure to look beyond your immediate needs and include likely future requirements to find vendors that will be long-term partners as you grow.

Every data center is different, so once you have contracted with a vendor, be sure to provide the training, resources, and management support they need to be successful with your organization.

? DID YOU KNOW?

Outsourced data center contracting is growing by 15% per year.

⚎ FROM THE EXPERT:

"You're paying for [colocation] power and space upfront, so it's a matter of how much you can get out of those resources. You don't really know how much you can get out of a power feed until you actually measure its use and being able to utilize that extra (stranded) capacity in any facility is pretty massive when you're already paying for it."

COMCAST **Michael Piers**

Read the case study

Sunbird®

SLA Management

Service-level agreements (SLAs) sets clear and measurable guidelines, keeps goals aligned, and allows for recourse when obligations are not met.

Successful data center managers leverage SLAs as a way of specifying in exact terms what is an acceptable level of service from their providers. The service provider needs to meet the terms defined in the SLA or risk penalties. For example, colocation providers typically have SLAs that cover the availability of support, power, cooling, and network connectivity.

On the other hand, data center managers have internal or external customers that they have their own SLAs with. The best data center managers track important KPIs to ensure that they are meeting their end of the SLA.

By tracking how long it takes to implement a change from request to completion and monitoring how long each stage of a change takes, you'll have real data to compare against your SLAs. Should changes take too long in your data center, you can examine the data and identify why and in what stage the bottleneck is happening.

You should also track the number of change requests, tickets, and work orders, who is making them, what progress is being made, and what types of changes are being requested. This will ensure work order quality and transparency while improving staff efficiency through enhanced collaboration.

DID YOU KNOW?

Common SLA metrics include uptime, response time, mean time to resolution, and customer satisfaction.

FROM THE EXPERT:

"We are the colo for the university. Anybody here at the university who's got a system can put their systems in. We've got to communicate with all our researchers on what's going on in their environments. If we see our central chill plant has a problem, thermal problems on equipment, or if anything starts to go awry, our DCIM is the center of the universe, but we need that tool to communicate proactively across the organization."

THE UNIVERSITY OF CHICAGO Raymond Parpart

Watch the video

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DCIM Software

#10

It is surprising that to this day, many data center managers—even those who are responsible for hundreds and thousands of cabinets of equipment—still use Excel, Visio, and homegrown databases to track and manage their data center assets.

These legacy management tools are time-consuming, inaccurate, difficult to maintain, and not designed to address the specific pain points of data center managers.

That is why the best data center managements in the world use second-generation DCIM software.

DCIM software provides a holistic view of all data center resources to enable the management of all your physical infrastructure in a single pane of glass. It gives you the ability to identify, locate, visualize, and manage all your assets, quickly provision new equipment, intelligently plan capacity for future growth, control energy costs, maintain uptime, and increase operational efficiency.

The most demanding data center managers choose modern DCIM software and are seeing serious ROI, such as:

- 900% more users on system compared to previous tool – Paddy Power Betfair
- 90% time savings checking equipment – Metro
- 50% increase in asset tracking efficiency – UF Health
- 40% more usage out of facilities and power resources – Comcast
- 25% less time managing assets, locations, and connectivity – Emerson

DID YOU KNOW?

Data center professionals' top objectives for deploying DCIM software are to monitor and report on power, energy, and environmental readings (84%), plan space and power capacity (72%), and manage assets (66%).

FROM THE EXPERT:

"We knew that a DCIM solution was going to be needed in order for us to have a chance of keeping up with capacity planning and growth and to track what's where and what we are doing in the data center."

UFHealth
UNIVERSITY OF FLORIDA HEALTH   Joe Keena

Read the case study

Conclusion

Managing a data center can be challenging, but with the right skills and tools, you can rise above the competition.

By understanding the technical aspects of the data center, being a strong leader and communicator, demanding the best from your vendors, and deploying modern soft-ware solutions that dramatically simplify your routine tasks, you too can be among the best data center managers in the world.

More Resources to Help You Be the Best Data Center Manager

- **Top 40 Data Center KPIs**
- **Top 10 Ways to Drive Data Center Automation**
- **10 Best Practices to Reduce Your Data Center's Carbon Footprint**
- **Remote Data Center Management: Metering, Monitoring, and Management in the New Normal**
- **What is a Data Center CMDB? DCIM as the Source of Truth**
- **Top 10 DCIM Software Customer Success Stories**
- **Top Data Center Certifications**

Take the Next Step with Sunbird

Schedule a Personalized Demo

Get a one-on-one live tour of our remote data center management software with a DCIM specialist.

Schedule Demo Now

DCIM Operations Online Demo

Remote 3D visualization of all your racks, assets, power, and network connections. View 200+ dashboard charts and reports. Know the capacity of all infrastructure items.

Try it Free

DCIM Monitoring Online Demo

Remotely monitor rack PDUs, UPSs, branch circuit meters, RPPs, floor PDUs, busways, cameras, door locks, and temperature, humidity, and other sensors. Remote central power control of all servers. Set thresholds, see trends, and get alerts.

Try it Free

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