10 Key Benefits of Panduit SmartZone™ DCIM Solutions

As organizations demand more from their IT infrastructure while requiring ever more efficient operations, data centers have become one of the primary areas of focus for improvement. During the first 40 years of data centers, the focus was simply on ensuring operational continuity and stability. However, in the last few years, there is a new focus on making data centers more efficient and more responsive to the changing organizations they support.

> **Intelligent DCIM has become the strategic descriptor of the move toward three prime goals:**
> - Efficiency (Energy and Operational)
> - Uptime
> - Capacity

Panduit SmartZone™ Solutions provide comprehensive intelligent DCIM software, hardware, and supporting services. This offering allows organizations to works synergistically with the normal IT operations lifecycle of "Plan/Deploy/Operate" to address operational issues. The following "Top 10" list offers examples of some of the key top-of-mind issues that SmartZone™ Solutions addresses.

#1 – Provide Highly Granular Data on Power Usage in the Data Center – When it comes to managing a data center, having accurate and specific information that tracks actual power usage at the rack, group, or functional level is critical to effective operations. This information is delivered by SmartZone™ Solutions, and allows IT operations to monitor, display, and document power utilization, as well as identify rising power and/or temperature threshold concerns to drive efficiencies and prevent downtime. Further, this information provides actionable data that can be used to identify underutilized or "stranded" power capacity that can potentially be reclaimed to maximize existing IT resources.

#2 – Automated Asset Tracking & Reconciliation – In most data centers there are regular changes to the devices that are deployed. In the past when changes were less frequent and there were fewer devices, manual or simple tracking tools were acceptable - but this is no longer the case. Using manual or rudimentary asset tracking solutions often results in inaccurate, outdated information and the need for audits, which can cost up to $40,000 each time. SmartZone™ Solutions provide complete and up to date asset tracking of connected infrastructure devices. Automated asset tracking is critical to optimizing costs such as software

licensing or maintenance contracts where accurate hardware inventory drives spending cuts. Another important element of this capability is to identify unused, underutilized, or inefficient devices that could be repurposed or replaced to lower operating costs. In addition, this capability simplifies the reconciliation of overall asset tracking so that the tool alerts you to changes, not the other way around.

#3 – Intelligently Deploy Assets – As new storage, servers, and network equipment are deployed in the data center, the question of where to physically locate them becomes very important. Overloading the electrical, connectivity, or cooling capacity in a specific location can result in unplanned downtime, a situation no one wants. However, without accurate information on the actual rack location details, what resource capacity exists, and where environmental support is assured, installing new hardware can be risky. Panduit SmartZone™ Solutions gather this crucial information to allow for faster and more successful hardware installation and provides guidance for patching, resulting in substantial time-savings in IT operations.

#4 – Reclaim Stranded Capacity – As pressure builds to support business needs, it results in data center growth to support IT demands. These growing needs are causing data centers to fill up quickly, and organizations to spend CAPEX on building or expanding existing resources. The ability to identify and use every bit of your existing data center to forgo or delay costly new builds as long as possible is very valuable. The Panduit SmartZone™ Solutions provide visibility of actual power, cooling, space, and connectivity resources being utilized, as well as what is still available for use. This includes the ability to identify "stranded capacity", where full utilization of one or more resources is constrained by full consumption of one or more other resource in a rack or cabinet. For instance, one cabinet may be only using 50% of its available power consumption because there is no available physical space left to deploy devices. Insight gained from DCIM software provides actionable data for IT to possibly reconfigure or decommission devices and balance out available resource consumption. This allows maximum overall utilization to ideally postpone the need for new data center builds or expansions. Without proper visibility, making uninformed changes creates serious risk of negatively impacting operations. SmartZone™ solutions provide the accurate, current and specific information necessary to understand current capacity resources, and help to identify stranded capacity that could be reclaimed.

#5 – Real-time Environmental Monitoring – Many data centers now operate closer to their environmental limits than was typically the case in the past. Further, many of the most modern servers and other hardware devices will operate at different utilization levels, changing their environmental impact constantly. This situation requires real-time monitoring of all aspects of the data center environment. The Panduit offering is designed to not only provide real-time temperature and humidity metrics, but to deliver this data with a level of granularity necessary to allow IT operations to effectively

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manage all zones of the data center, and prevent downtime. This SmartZone™ Solution capability also creates the information necessary to develop trending analysis so that action can be taken before any situation becomes critical. SmartZone™ Solutions offer industry-leading wireless monitoring and cooling control solutions that work with extensive power, IT asset and connectivity management for a complete DCIM solution.

#6 – Improve Uptime & Reliability – Ensuring that the data center remains fully operational is likely the single most important aspect of IT operations, and Panduit SmartZone™ Solutions helps to minimize downtime risks. By monitoring power, environmental, and connectivity conditions around the clock, SmartZone™ Solutions can actively identify rising temperature concerns, unplanned connectivity disruptions, or even unauthorized access to cabinets or network ports. DCIM software can then send immediate notification alerts of events and locations for immediate resolution and lowered mean time to repair (MTTR). This capability is essential to ensure that IT is able to meet SLAs.

#7 – Reduce Mean Time to Repair (MTTR) – Despite the relatively high reliability of most data center components, systems or other elements of the data center occasionally need replacement. The ability to do this as quickly and effectively as possible is critical to operations, and a key part of Panduit SmartZone™ Solutions. The solution starts by providing real-time monitoring to identify where problems may exist. The system then accurately identifies failed or compromised hardware, and where it is physically located. And, as security becomes ever more important, SmartZone™ Solutions can identify and discover where authorized, erroneous or unauthorized changes to network connections have occurred, facilitating repair or addressing other possible problems with network hardware devices.

#8 – Faster Identification of Unauthorized or Compromised Network Access – The network is highly important in nearly every aspect of IT operations. Having a full and complete picture of how the network is functioning and any changes in network use and access is critical. Panduit SmartZone™ Solutions allow faster identification of any changes or interruption to the network that impacts the switches. The solution provides real-time monitoring of the switches, with the ability to set custom parameters to prevent "false" positives, or to highlight only specific conditions. There is also automated discovery of any changes, including new devices, unauthorized devices, and any changed devices. SmartZone™ also offers enhanced control of physical access to data center assets to protect from unintentional or unauthorized access to devices.

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#9 – Calculating Accurate PUE Metrics – There are multiple initiatives and compliance demands that require more accurate information about data center operations, especially around Power Usage Effectiveness (PUE). This is where the Panduit solution truly shines. Starting with a design that integrates data center metrics into the overall building usage data, SmartZone™ Solutions provide more granular and accurate data than most other approaches. These solutions provide data on power consumption beyond the Power Distribution Unit (PDU), a comparison between building provided power and IT used power, and full support for PUE2 Category 3, which provides the most rigorous metrics.

#10 – Identify & Document Power and Cooling Cost Reductions – As organizations demand more cost cutting and budget efficiency from IT operations, there is a need to showcase the actual savings that have occurred. SmartZone™ Solutions provide consistent and accurate measurement of the data center environment that is regularly gathered, delivering the time sequence information necessary to show savings. The management console also provides a holistic perspective of data center operations to ensure all of this data is well integrated and can be viewed cohesively. There is also complete and comprehensive documentation on the actual efficiency and power reductions that have been implemented which is critical for compliance programs. Finally, the data is highly granular, providing the detail needed to show how savings were achieved and the insight to understand these savings.

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