The importance of comprehensive asset management

Carefully chosen and implemented, automated Data Centre Infrastructure Management (DCIM) software can eliminate spreadsheets, increase productivity, reduce costs and improve visibility. By Panduit.

With the rapid adoption of Data Centre Infrastructure Management (DCIM) solutions, there is a growing need for a precise approach to its implementation. DCIM systems are often put in place under the assumption that the information it utilises regarding the physical infrastructure is accurate; unfortunately, this is often not the case.

Few mature IT asset tracking tools currently exist — and those that do exist can lack detail or are compromised by a lack of integration with traditional management tools. Some organisations have no specialized IT asset-related systems in place at all. It is therefore difficult for many data centre managers to know what assets exist in their data centres at any moment, and this deficiency exposes data centres to significant risk, and increased operational expense.

Manual asset tracking techniques such as spreadsheets are commonly used to track assets and maintain a Configuration Management Database (CMDB) and ensure Information Technology Infrastructure Library (ITIL) compliance. However, the proliferation of errors together with a lack of relevant, up-to-date information within these manual records can render such databases and processes insufficient and ineffective.

A comprehensive asset management solution for high-value, high-utilisation IT assets can deliver significant benefits to the enterprise, co-location facility, or cloud provider data centre. An automated asset tracking solution should unify all asset tracking methods in a reliable, integrated manner to capture all physical infrastructure assets from deployment to decommission, providing an essential basis for DCIM processes.

The Challenges of Physical Infrastructure Management

IT equipment power densities are steadily increasing, along with pressures on data centre management to extend facility lifecycles with better capacity and asset utilisation. As a result, tighter restrictions are imposed on resources, and extreme value is placed on efficient data centre operations.

Facility management teams rely on asset presence and utilisation data in order to provision and budget for room-level resources. Risk mitigation and SLA compliance are crucial, especially in mission-critical facilities where downtime can cost millions of dollars in lost business. Facility managers must be able to effectively control the data centre environment, which requires knowledge of the IT assets within.

Finance departments carry out asset auditing, accounting for fixed tangible assets and renewals, and depreciation scheduling – activities which all require precise IT asset data, from the cradle to the grave.

An increase in co-location facilities, cloud computing, and virtualization is also driving the need to keep an accurate record of the assets within each business unit, both to provide stakeholders with the required assurances of continued uptime, and to protect proprietary asset information.

A failure to accurately record the required asset data eventually impedes the effectiveness of facility management, the finance team, and eventually the data centre itself. It also inevitably results in lost assets, which means wasted dollars.

Despite this, a recent survey of data centre CIOs found that a majority (61%) of data centre managers still rely on manual spreadsheets or have no formal process in place to manage physical IT asset moves, adds, and changes (MACs).

Current Asset Tracking Systems

Most available DCIM approaches do not appropriately address IT asset tracking and management. Some organisations choose a combination of systems to try and counter this, but run the risk of experiencing process conflicts and overlaps which slow down overall business operations. It is important to understand why these approaches are generally not capable of providing an optimised end-to-end asset tracking solution.

- Data centre mapping involves documenting/modelling the data centre by asset name and location. Assets are often grouped according to the division/department utilising them. Grouping can be useful in the case of co-location facilities and cloud computing service providers, but little information is recorded regarding resource utilisation, and this can leave facility managers stranded. Under this method, assets are not recorded from deployment through decommissioning and disposal,
and connectivity data is limited or absent.

- Utilisation mapping focuses on grouping assets in terms of the resources they consume. Priority is given to power and thermal characteristics over location data, and little thought is given to connectivity or networking. While useful for provisioning activities, this technique lacks detail and precision, especially regarding the whereabouts, port connections, and port capacity of assets. Specifically, information about asset acquisition, setup, location, MACs and decommissioning is not recorded, giving data centre operators no information about past or future actions surrounding their assets.

- Operational process mapping comes in many forms:
  - Big asset processes are typically utilised for asset acquisition and management within an entire organisation and allow management of general paperwork such as invoices, leases, chargeback schemes, licensing, renewals and dispositions. These systems are not optimised for data centres, therefore offering few monitoring capabilities and little provision for utilisation data.
  - Small asset systems often rely on the use of manual spreadsheets. While these give staff the freedom to record the level of detail they choose, this often results in a lack of relevant information. The manual spreadsheet is difficult to keep error-free and up to date – especially when visibility and editing rights are required for more than one person.

- Change management processes, such as the use of work order requests, form an established stage of the Information Technology Service Management (ITSM) process that contributes to ITIL compliance. It is intended to keep the necessary parties up to date with MACs in the data centre, while reducing the risk of unsuitable changes. However the level of detail recorded can be sparse, and there are no means to check whether a work order request is strictly adhered to.

**Selecting an Asset Tracking and Utilisation Solution**

It is important to note that existing solutions are available which provide high-level asset tracking capabilities, as well as the opportunity to integrate with existing management systems. The following qualities are important when evaluating any potential DCIM system:

1. Highly detailed asset tracking information and real-time notifications of MACs, together with tracking and monitoring of all authorized and unauthorized modifications to any asset.

2. Visibility of the entire asset network and connectivity details for data centres and extended enterprises with real-time connectivity updates. Advanced solutions map active and passive end-to-end connectivity, allowing users to trace patch cord ends and view port-level connectivity.

3. A complete DCIM solution with detailed information on asset tracking and utilisation along with connectivity, power and space. Some solutions feature real-time reporting and documenting of items such as patch field configuration changes and asset movements, and automatically update database information accordingly.

**Conclusion**

There is a pressing need for mature asset tracking methods within DCIM processes. Many existing asset tracking systems generally tackle individual aspects of asset management, rather than offering a complete solution. However, the limitations of these systems can cause extra problems which may require additional systems and further expenditure to address. It is therefore important to prioritise DCIM solutions that provide accurate, timely, and actionable information on physical assets, improved visibility into asset MACs, and process-driven integration with applicable management systems in order to ensure reliable and effective facility management, and improve the operations of a facility as a whole.

Read the full Integrated Asset Tracking Solutions White Paper at [www.panduit.com](http://www.panduit.com/)