

Considerations on Evaluating a DCIM Solution

A Simple Four-Step Process to Getting it Right the First Time

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Executive Summary

Data Center Infrastructure Management (DCIM) is a term that is accepted, yet still loosely defined, in the field. It means different things to different people and companies. This lack of definition results in so much confusion in how to evaluate the benefits of one DCIM product over another.

This paper proposes that the benefits of DCIM should be evaluated in the context of a solution rather than product features.

Features are important and they are the primary basis by which one would expect the tool users to make their evaluation. The primary interest of the end users is: is this tool easy to use and will it make my job easier?

Evaluating DCIM as a solution provides a better lens for a company in determining the best DCIM tool to invest in for company's top performance.

Considerations on Evaluating a DCIM Solution

Step One

Evaluating a DCIM solution begins with a genuine introspection of the pain experienced within the company. One would want to understand;

- What is the pain?
- Who is affected?
- How often does it occur?
- How much does it cost?
- How does it impact our customers?

The following is an example of a common issue in the data center and how it may impact the organization.

Pain: Data center personnel managing the critical infrastructure are unable to:

1. holistically improve staff efficiencies and lower energy costs (OpEx)
2. reduce the risk of unplanned downtime or security breaches (OpEx)
3. increase flexibility and agility by aligning the physical layer with IT operations (OpEx)
4. maximize their capital investment (CapEx)
5. automate processes (OpEx)

This is the kind of pain one would expect to affect the Data Center Manager, Facility Manager, Director, or VP for Operations, for all verticals in a medium to large data center. There is even a significant impact on the CIO, CFO and CEO.

The following are examples of how the above mentioned pain might create a web of pain across the organization:

Data Center Manager's Pain

- Difficulty planning changes
- The accuracy of capacity forecasts is questioned
- Costly rework because IT equipment was not placed in the correct location the first time
- Failure to meet SLAs for deploying equipment or completing consolidation projects
- Difficulty completing equipment audits on time
- Unable to determine what applications (virtual), business services or departments are impacted when equipment is offline
- Too many people must have access to the data center floor

Facility Manager's Pain

- Longer mean time to repair
- Increased expenses to hire specialized resources to analyze data or perform additional environmental scans and audits
- Last-minute fire drills because of a lack of visibility into upcoming projects

- Unplanned downtime and the cost of downtime
- Excessive capital expenses to build in "capacity buffers" to avoid exceeding equipment thresholds
- Reluctance to turn on the power saving features on equipment because of uncertainty about the impact on availability
- Limited purchasing options because the alarm management solution supports 1-2 vendors' products

Director/VP for Operation's Pain

- Preventing the adoption of standardized processes across the business
- Unable to accurately plan for future growth
- Lack of coordination with finance and other departments
- Unable to control operational costs or determine how to reduce costs without compromising the infrastructure availability and performance

CIO's Pain

- Be an enabler for the business to ensure success
- Converting IT from a cost center to a profit center
- Secure access to critical business services
- Meet government and industry energy efficiency standards

CFO/CEO's Pain

- Increasing operating costs that negatively impact profit margin
- Concerns about executing acquisitions or mergers
- Meeting the strategic objectives of the company
- Maintaining service levels and brand image

With this example of pain and pain impact, begin building a table that contains the following content:

Pain Identification Matrix (example)

Pain	Who	How often?	Cost
Difficulty planning changes. Excessive CapEx invested in latent demand.	DC Mgr Fac Mgr VP-IT CIO CFO	Estimated 350 MACs per month and experiencing two-month lag in data center changes.	\$800K/year in underused infrastructure maintenance \$125K/year for two FTE to calculate resources and manage change \$200K/month – in delayed business

You now have the foundation for determining your potential return on investment.

Step Two

Once pain is identified, mapped across the organization and quantified, the next step would be to identify the desired state. Determine, as a team, what kind of functionality would be required from a DCIM solution.

Decide how you want the pain solved. An easy way to do that is to fill in the blanks for the following solution statement:

When <<event>> happens, <<who (person/team/system)>> will <<do what>>.

Populate a table with the information from each of these solution statements as in the example below.

Solution Statement Matrix (example)

Event	Who	What
When a breaker is scheduled for a PM,	the facilities team	can determine impact on all downstream devices and applications and notify the stakeholders.
When an alarm is received that a cabinet has hit its minimum warning threshold for heat capacity,	the DCIM system	will send a notification containing correlated events from all devices in the cabinet and devices connecting to them as well as parametric data for the CRAC devices within the same zone.
When a data center consolidation is considered,	the facilities team	can quickly determine when and where to add capacity based on a projected timeline of changes in the environment.

Step Three

DCIM vendors that are believed to have the capabilities required to meet the needs determined in the Solution Statement Matrix should then be identified.

Give the DCIM vendor your list and negotiate with them to demonstrate some of these specific cases.

Step Four

You now have a very short list of DCIM vendors that can prove, to your satisfaction, their ability to deliver the capabilities you require. Bring in your team and have them evaluate the features and functions of the DCIM toolset.

Engage your selected vendors in a thorough ROI process. Be prepared with your Pain Impact Matrix you prepared in Step One.

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