"Barcode Scanning and the Physical Model"

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BARCODE SCANNING and the Physical Model

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As you implement your CMDB, don't forget barcodes and the physical model. Barcode scanning technology can help you perform a wall-to-wall physical inventory, picking up where automated discovery tools leave off.

The business value of a configuration management database, or CMDB, is clear. A CMDB provides insight into an organization's IT infrastructure, revealing the relationship between components in the infrastructure and critical IT services delivered to the organization. An effective CMDB strategy enables an enterprise to control, maintain, and continuously improve that infrastructure to enhance IT value to its business. If you are going to rely on your CMDB for strategic and financial decisions, compliance efforts, and other critical activities, your CMDB must be accurate, complete, and trusted by your executive decision makers.

In the past, one inhibitor to successfully deploying a CMDB was the high cost of collecting and maintaining data in the CMDB. Now, a wide range of tools can automate data collection and reconciliation, providing an attractive benefit-to-cost ratio for achieving the level of accuracy, completeness, and trustworthiness you need. These tools eliminate manual processes for capturing and maintaining configuration information on the huge number of assets that can be discovered automatically.

A key challenge is that some assets fall outside the scope of automated discovery tools — peripherals that are not discoverable, inventory items, spare parts, etc. These items are part of the physical model, and an actual physical inventory is needed to capture these assets. As Figure 1 illustrates, automated discovery tools capture the bulk of the data

by identifying assets in the environment, cataloging them in a common database, and keeping the data current by discovering changes and updating the CMDB. By accounting for assets that fall outside the

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scope of discovery tools, you increase the level of completeness and accuracy of your CMDB, providing a rich source of information

for purchasing decisions, streamlining cross-functional IT processes, and ensuring the delivery of expected levels of service.

So, should your enterprise implement barcode scanning to pick up where discovery tools leave off?

A number of our customers have answered yes to this question. Their reasons vary depending on business need and the maturity of their configuration management strategy. In most cases, customers see the need to capture a complete picture of the environment at least once per year. Using a barcode scanning solution reduces the significant time and effort involved in a manual physical inventory.
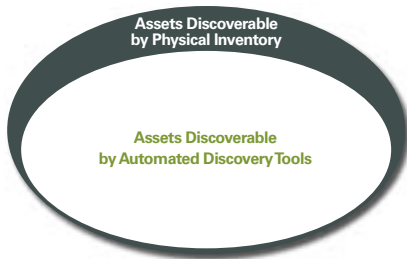
FIGURE 1. **Complete, Accurate CMDB**

Capturing all assets in the CMDB requires a combination of automated discovery and physical inventory.

Some of our customers also require a process to keep asset and configuration data accurate on a daily basis so they can improve decision-making and facilitate compliance with government mandates. Customized barcode scanning applications built to track assets throughout their lifecycle make this task not only possible, but painless as well. Companies such as Borders Books and Music maintain a warehouse to store IT assets while out of service, in preparation for service, or en route from one location to another. In the warehouse environment, maintenance of accurate asset information requires barcode scanning applications to support many focused rote tasks, such as Receive or Pick, providing an interface that allows warehouse technicians to complete their work as efficiently as possible while maintaining control over data integrity.

We recommend two major steps to ensure a successful barcode scanning implementation:
1. Start with a discovery assessment.
2. Develop a barcode scanning strategy based on what you learn from that assessment.

DISCOVERY ASSESSMENT

A discovery assessment involves examining the results produced by your automated discovery tools to find out which assets are covered and if the data provided is sufficient to support your CMDB strategy. Enterprises approach CMDB implementations in a variety of ways. Some enterprises may limit tracking to major assets — such as servers, workstations, and laptops — while others

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want to include peripherals, software licenses, contracts, and warranties. Whatever the case in your enterprise, you need to answer several key questions:

> Which assets are not discovered by automated discovery tools?
> What problems will arise if those assets are not part of the CMDB? (How much might it cost? How will it affect legislative and regulatory compliance efforts?)
> What problems will arise when asset disposition, ownership, or location change without corresponding updates made to the CMDB?
> How often does the disposition, ownership, or location of various assets change?

The answers to these questions help you lay the groundwork for developing a barcode scanning strategy.

BARCODE SCANNING STRATEGY

The initial barcode scanning effort is a wall-to-wall physical inventory that encompasses all components, locations, and associated users. This physical inventory sets the CMDB accuracy at 99 percent or greater at a given point in time, providing a clear picture of what assets the enterprise owns, where they are located, whether or not they are in service, and other valuable information that assists decision-making.

The accuracy of the CMDB after the physical inventory is short lived, though, because the

IT infrastructure is in a constant state of flux. Consequently, you need to determine a barcode scanning strategy that sufficiently catches infrastructure changes as they occur.

Here is a simple example in an environment with 1,000 assets:
> 400 assets are discoverable — assume these are PC workstations.
> An additional 500 peripheral assets can be marked in the CMDB as associated with discoverable assets — assume monitors and printers can be marked in the CMDB as associated to their PC workstations.
> The final 100 assets are new or currently out-of-service.

The recommended barcode strategy for this case is three-fold:
> On an annual basis, perform the wall-to-wall inventory and take time to accurately associate peripheral assets with discoverable assets.
> On a monthly basis, perform an inventory of all new and out-of-service assets.
> On a daily basis, formally receive new assets into the CMDB and formally decommission assets that are being removed from the CMDB.

With this strategy, CMDB accuracy will be maintained as long as users do not swap peripherals. If such swapping is a common practice, then you may want to consider performing the wall-to-wall inventory on

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a quarterly or monthly basis. An alternative is to follow the lead of companies such as Intuit, which has equipped its IT technicians with pocket-size scanners that let them immediately update the CMDB with all changes to assets.

RELIABLE INFORMATION FOR CONTINUOUS IMPROVEMENT

Knowing what makes up your IT infrastructure and how individual components relate to each other can bring compelling benefits: lower costs, reduced staffing requirements, better resource and performance estimates, enhanced ability to commit to and meet service levels, and improved risk management. Many enterprises are finding that they can increase the accuracy of their CMDB data by implementing a barcode scanning strategy that identifies assets

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not discovered through automated tools. The result is highly reliable information that improves decision-making and enables the enterprise to continuously improve the efficiency and effectiveness of its IT asset management.

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