



Dynamic Discovery

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White Paper

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An IT audit is the conventional solution to address compliance issues within asset management. Rather than be considered as a tactical expense, audit information, collected dynamically so it accurately reflects network changes, should become a management tool from which organizations derive strategic and monetary value.

Compliance: A necessary evil?

Under current legislation, company directors are legally responsible for the contents and output of their organization's IT networks. So it is not surprising that the group of regulatory issues under the heading of 'Compliance' casts a long and expensive shadow over the IT operations of most organizations.

The board rightly ensures compliance with vendor software licenses and regulations regarding business continuity and governance, such as Sarbanes-Oxley, Basel II and the Data Protection Act, are high on the CIO's agenda. After all, failure to meet the demands of these regulations could rebound on the directors personally, and in extreme cases with prison sentences.

Service level agreements (SLAs) and IT usage policies add to the list of what IT management must do to meet its targets, while operating effectively and within budget. Consequently, organizations often regard compliance issues in their broadest context as a necessary evil: they consume resources with no positive return.

Compliance has become a euphemism for mitigating the threat of prosecution or public chastisement, a checklist of compliance must-haves to be dealt with tactically.

Traditional audit: Tactical response

The question the CIO has to answer is “are the assets on our network compliant to the various policies, standards, regulations and laws and, if not, what do we have to do to make them so?”

The response usually begins with a traditional audit of the organization’s IT network, to identify what exists and the compliance status of each component. This is followed by a schedule of what must be done to bring any noncompliant components into line.

This tactical response is both ineffective and inadequate. Ineffective, because the audit information is only used to address the issue of compliance, as if compliance were an end in itself. No positive benefit is derived. Inadequate, because a conventional audit conducted as a one-off or scheduled on even a monthly basis, provides a snapshot of the network only at that moment in time. Subsequent changes cannot be acted upon until the next audit takes place.

Increasing rate of change

IT assets are in a constant state of flux. Software is updated on ever-shorter cycles and deployed unevenly across the organization. The pick-and-choose functionality of packaged software is ubiquitous, while monolithic applications are modified by pilot projects, limited roll-outs and increased personalization.

Hardware assets are no less fickle. Mobile and remote working is mushrooming, often outside the controls of corporate IT policy. The increasing use of wireless technology means networks are deployed, dismantled and redeployed in rapid succession to take advantage of rapidly changing business opportunities.

In this environment, the traditional one-off IT audit is an anachronism; even monthly scheduled audits cannot keep up. The future of IT audit has to be dynamic.

Dynamic audit: Strategic role

The limitations of conventional IT audit are leading smart organizations to take a strategic view of audit, to regard it as a state of dynamic intelligence, continuously logging changes to the network in real-time and analyzing their effect on IT assets and liabilities.

Once the IT audit becomes a dynamic process it is no longer a tactical expense with which to tackle compliance issues, but a strategic tool of net positive benefit. Dynamic Discovery enables the CIO to match business needs with IT assets and to ensure assets are delivering their maximum potential value to the organization.

Dynamic asset information is reliable in a way that a scheduled audit never can be. Dynamic Discovery supports better decisions about procurement of new products and the retirement of unused assets. It can be integrated with financial packages to manage leasing agreements, and used to automate the workflow process and improve the efficiency of help desk operations.

Dynamic Discovery in Action: A Four Stage Process

Organizations that adopt Dynamic Discovery as part of its asset management process, relegates compliance to step three of a four-stage continuum that constantly monitors the status of the network’s assets, to optimizing assets. This makes compliance part of a process, a by-product, not an end in itself.

Visibility	Rationalization	Compliance	Optimization
Effective IT management needs total network visibility	Match IT assets with business requirements to take control of IT spend	Achieve compliance with external regulations and enforce internal policies	Derive maximum potential value from all IT assets
Issues			
<ul style="list-style-type: none"> You can't control what you haven't measured Visibility of all IP-addressable assets regardless of platform Physical location mapping Monitoring changes: what is entering and leaving the network? Audit frequency: how long does it take to find out about changes? 	<ul style="list-style-type: none"> Monitor hardware and software usage Monitor user behavior Plan purchases in line with business requirements Eliminate unauthorized purchasing Retire unused IT assets and terminate support Redeploy under-utilized assets 	<ul style="list-style-type: none"> Ensure compliance with governmental regulations such as Sarbanes-Oxley Ensure compliance with software licenses Enforce SLAs & IT usage policy Identify unauthorized software Minimize vulnerabilities Track critical assets associated with SOX or HIPAA compliance 	<ul style="list-style-type: none"> Ensure IT investments deliver maximum value through usage and availability Integrate on-demand asset information with helpdesk, financial systems, application management and deployment etc Reduce downtime and project inefficiencies Identify legacy risks and business continuity threats
Discovery feature set			
<ul style="list-style-type: none"> Automatic discovery of all IP-addressable assets Physical location tracking Automatic tracking of changing assets Key change alerts to notify users of selected status changes Customizable view of network assets Multi-platform coverage Accuracy of classification of discovered 	<ul style="list-style-type: none"> Dynamic alerts for new hardware and software Software usage tracking Customizable analysis reports for asset usage Modelling tool for assessing potential changes 	<ul style="list-style-type: none"> Match software usage licenses held to identify over- and underutilization Identify software by file type to identify inappropriate use of IT facilities Blacklisted software list to identify applications not intended for business use Analyze software and firmware for known vulnerabilities to enable proactive remediation Link to software directory to assess product purpose and licensing requirements 	<ul style="list-style-type: none"> Industry standard audit database format and simplified integration options Project planning wizards for upgrades Customizable reporting Dashboard to enable holistic view of IT assets under management

Stage 1: Visibility

Managing IT effectively starts with the complete visibility of IT assets. It is more than just knowing they exist, but knowing they are correctly identified, where they are located, how much they are used and their detailed configuration. A one-off audit does not adequately capture the changes in state of these dynamic assets.

Asset information that is maintained dynamically provides the CIO with a clear picture of the IT environment, allowing them to align business requirements with the IT assets at their disposal.

Stage 2: Rationalization

IT spend can be rationalized with purchases based on genuine business requirement. According to a KPMG survey, organizations can save 10 to 40 percent of overall IT costs by effective procurement and management of IT assets.

Waste due to inefficiency through a lack of meaningful and timely analysis can now be mitigated. Under-utilized assets can be redeployed to where they are most needed; unused assets can be disposed of and support contracts terminated.

Stage 3: Compliance

Compliance is a natural progression within this process. Software can be licensed based on real usage profiles rather than standard configurations. User behavior that potentially breaches continuity and governance regulations, SLAs and IT policy can be identified and addressed as it occurs. Sporadic vulnerabilities can be secured before they become events.

Stage 4: Optimization

Dynamic asset discovery ensures asset usage can be fully optimized to deliver the maximum value possible to the organization. According to Gartner Group research, the average IT support call halves in duration from 17min to 8.5min when helpdesk staff have current, accurate asset information available. Clearly this figure alone has considerable productivity repercussions, not just for the helpdesk, but also for the organization as a whole.

According to Gartner, IT asset management will reduce the cost per asset by as much as 30 percent in the first year, and between 5 and 10 percent annually in the next five years.

However, for an organization to realize fiscal gains from dynamic audit, the discovered information needs to be available in a form that enables the user to pinpoint issues and opportunities in a flexible and intuitive manner, so that the organization can truly assess the effectiveness, usage and liabilities of their IT assets.

For example, discovering that a network contains 8,000 executable files is merely raw data. But knowing that these files belong to 250 applications of which 110 require licensing is useful. The ability to further link this data externally, to information about the packages, what they do, who develops them and whether they are licensable is truly valuable to the efficiency and management of the organization.

Such actionable information is the intelligence in Dynamic Discovery, resulting in informed decision-making.

Audit Tool Selection

To achieve Dynamic Discovery, current audit information must be available on demand. If it is historical it cannot be relied on to give an accurate picture. If it has to be scheduled it will be out of date immediately it is run.

If it cannot provide timely reports that summarize changes only, it will burden the network with unnecessary traffic and lack currency by the time it is gathered.

So Dynamic Discovery implies the use of agent-based asset discovery software that, having executed an initial full audit, thereafter reports only changes to assets (delta reporting) to ensure as low a bandwidth profile as possible. Using conventional audit software, a typical audit has a 2500Kb bandwidth overhead. But leading tools vendors can deliver agent-based audit tools that typically generate less than 100Kb for the initial audit and only 1K to 2Kb for continuous delta reporting of changes detected.

With sensitive data about IT assets constantly transmitted over the network, Dynamic Discovery also implies the use of secure agents that can only be used for the purpose intended.

The resulting information needs to be displayed intelligently to relate assets to IT operations. An asset discovery solution should provide an aggregate view showing where software is over or under licensed, or where segments of the network are over or under specified for the operations they carry.

From the aggregate view, IT staff should be able to drill down to individual assets to identify purchasing requirements or redeployment opportunities.

An asset discovery tool should also provide links to external sources of information about IT liabilities, for example, to software vendors' licensing information, so as to help organizations manage the IT ecosystem of vendor, reseller regulatory body and user organization.

Obviously all audit software is limited to devices, which are physically or virtually connected to the network.

No audit package can replace the peace-of-mind value of periodic 'walk-round' audits to identify assets that are not connected and to formally tie up physical asset tags to discovered devices.

Lastly, audit information needs to be in a form, such as an industry-standard SQL database, which can be integrated easily with other software packages, for example, financial systems and the helpdesk database.

The four-stage Dynamic Discovery process requires an asset discovery solution with the following characteristics:

- Granular discovery of hardware and software assets
- Proactive discovery of all IP-addressable assets, including routers, printers, modems etc, not just PCs and servers
- Multiplatform support, not just Wintel
- Ability to manage audits over LAN, WAN and Internet as well as offline assets
- Physical location tracking of assets
- Automatic detection of new assets
- System alerts of key changes, such as additions, deletions or moves
- Analysis of effects of changes on liabilities
- Software usage tracking
- Easy integration with related software, such as help desk, asset management, client service management
- Very low bandwidth profile and delta reporting
- Secure agents with communications that cannot be intercepted
- Dashboard summary to highlight status of critical issues
- Flexible web interface to enable different users to access data relevant to their needs
- Helps to manage information flow in the IT ecosystem
- Simple to deploy and rapid delivery of results.

Dynamic Discovery: ITIL Impact

Dynamic audits, as a function of Configuration Management, form an integral part of the Service Management process. Dynamic Discovery ensures all component details or item information within the IT infrastructure is recorded in current, accurate and comprehensive detail.

Through tight integration with a Service Management Tool, any changes in the IT environment automatically create a Change Request (RFC), this procedure identifies any unauthorized changes to the environment and allows appropriate action to be taken.

Using the data captured by the dynamic audit, the Configuration Management Database (CMDB) can synchronize configuration item information, and relationships to other IT components in real-time, which allows the service desk to assess the impact of any change requests, incidents or problems experienced by IT users.

In the big picture, the Service Delivery process relies on the data recorded within the CMDB for:

- Service Level Management - to identify components that work together to deliver a service, so that supporting agreements can be created
- Financial Management - to allow IT Management identify usage patterns by business units, and charge accordingly, if relevant
- IT Service Continuity and Availability Management - to identify components to perform risk analysis and component failure impact analysis.

Conclusion

Dynamic Discovery provides more accurate information about the ever-changing IT landscape of an organization. Where traditional audits were merely used to measure compliance, sound IT asset management relies on dynamic asset discovery. Compliance is not an end in itself, and asset discovery should not be a knee-jerk tactical response to compliance issues, but a dynamic process that supports strategic direction.

Dynamic asset information can yield real fiscal gains by helping the CIO optimize IT resources to match business requirements, and highlight areas that are under- or over-resourced.

Displayed in management console format, dynamic asset discovery information promotes a state of dynamic state intelligence that enables the CIO to maximize benefits derived from all IT assets.

LiveTime Discovery

LiveTime Discovery promotes Dynamic Discovery for organizations through its ability to automatically find, audit and track all hardware and software on the network.

LiveTime Discovery creates a complete picture of all IT assets (from PCs and servers through to network printers, switches and even appliances), what software is installed on them and where in the enterprise they are located. What's more, rather than relying on scheduled audits, LiveTime Discovery dynamic client agents ensure that any changes on the network are reflected in the Control Center without delay.

Armed with this information, executives can make informed decisions about all aspects of IT operations, from recognizing where software use exceeds license entitlement, to monitoring the roll-out of a new operating system.

LiveTime Discovery's ability to tightly integrate with LiveTime Service Manager, allows organizations to build an accurate and comprehensive CMDB to effectively manage all change requests, problems and incidents the service desk customers may experience. This product combination allows organizations to tightly align its business objectives with IT assets.

For more information:

For more information about LiveTime Discovery or to discuss how LiveTime can assist you in your Discovery or Service Management project, please visit our website or contact us at info@livetime.com.

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