



LANDesk® Asset Lifecycle Manager

Integrator's Guide

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Asset Lifecycle Manager Integrator's Guide

Introduction

In a typical organization, dozens of IT assets may be underutilized or wrongly assigned, unneeded assets may be purchased and maintained to fill in the gaps, and IT may be chronically undercompensated for their actual expense in providing services. Additionally, compliance and reporting issues require sound asset management, which, if not in place, can be costly in both time and money.

How do you approach asset management? SAP, spreadsheets, e-mails, a clipboard with written data, LDMS inventory? Regardless of the way you have handled asset management, the key point is this: the data is already there.

LANDesk® Asset Lifecycle Manager (ALM) helps you “connect the dots” — with ALM you tie your various data sources into a large data repository. This repository helps you save money by tracking assets, reclaiming unused assets, making wiser purchasing decisions, and avoiding costly fines and publicity with proper compliance.

ALM provides asset management that matches the enterprise's business needs. It tracks the asset's lifecycle as it changes from the state of being purchased all the way to its disposal. ALM also provides the ability to automate actions based on any number of triggers. This allows updates and notifications to happen automatically.

ALM provides the ability to retrieve data from outside sources using synchronization tools. It can also send data to other management systems through automated actions. This allows ALM to work with existing data from other systems to help populate ALM with current data.

The purpose of this guide

This *Integrator's Guide* introduces you to best practices of IT asset management (ITAM), presents you with ideas on how to get started, and shows you how to best utilize ALM in your environment as you go forward.

This guide is a high-level view of what ALM can do for you. It does not give specific steps to accomplish the features mentioned. For specific instructions, see the *Asset Manager's Guide*, *Designer's Guide*, or online help.

Before you begin

IT Asset Management is a huge project that crosses many organizational boundaries. It will require buy-in and help from nearly every stakeholder in the organization. Settle in for the long haul and get comfortable with the fact that your plan will change constantly. Keep a clear eye on the goal, but understand that the path will change as you learn more. Be flexible and adaptable.

Before you begin a new ITAM project or improve an existing one, remember that this is a recursive process and that you will go through the entire process for each individual asset type you want to create. The first one will be hard as you exercise new disciplines, but second and subsequent iterations will go much faster and easier. The iterations will also build upon each other.

How much time will it take? That is hard to define. It depends on many factors (how deep you want to go, the accessibility of the data, the cooperation of its owners, and so forth). Just as importantly, remember that IT asset management is never really completed. Once you structure your asset repository and control both asset lifecycle and data update, you will then refine the system to track new data and derive new knowledge. Also, as the organization changes and grows, your structure will continue to evolve.

Finally, if all this effort to harness your assets seems daunting or even futile, please understand that your efforts will not be in vain. Any effort, no matter how small, will pay dividends. As your asset lifecycle management project evolves, it will become readily apparent that you are saving your organization a great deal of money and time.

Additional resources

There are other resources at your fingertips. The International Association of Information Technology Asset Managers (IAITAM) is the foremost resource for asset management. IAITAM “is the professional association for individuals and organizations involved in any aspect of IT Asset Management (“ITAM”), Software Asset Management (“SAM”), Hardware Asset Management, and the lifecycle processes for IT Asset Management in organizations of every size and industry across the globe” (IAITAM web site). The association can be found online at

<http://www.iaitam.org/>

IAITAM has compiled a best practices library, and provides asset management training and certifications, and publishes a monthly magazine that provides new information in the asset management field. Many providers of services and tools are included as members of the organization, and in turn add their knowledge and experience into the centralized information source that is IAITAM. Additionally, IAITAM publishes a Best Practices library, available as a set or as individual books. For more information, visit their website. A direct link to their best practices library is at

http://www.iaitam.org/PageTemplate2/dyn/ItemDescKey_6624

The LANDesk customer support page, <http://community.landesk.com>, has a knowledge base and forums. Additionally, white papers are found at

<http://www.landesk.com/promotions/whitepapers/AssetManagement.aspx>

Phase I — What do I want to accomplish?

Identify your top business objectives and accountabilities—in other words, your areas of highest immediate risk and impact that you have an ability to address through IT asset management. For most organizations that falls into a few high-level categories, including:

- Contract or license compliance
- Regulatory compliance and audit response
- Data protection and control
- Project planning (hardware/software refresh or upgrade), budgeting, and resource allocation

In other words, understand the business value of the project. Resist the urge to dive too deep into the solution details at this point—keep your goals at a reasonably high level that helps you put the lower-level tasks in a clear and specific value context.

Your ability to address these high-level categories will increase many-fold when you have a process in place to manage the lifecycle of the assets in your organization. ALM will let you control the entire asset lifecycle process, from asset procurement to disposal, and give you the ability to prove compliance quickly through the generation of reports.

It all starts with data

In your organization, there is data that can be managed. The amount of available data is virtually inexhaustible. Where do you start? It is always best to start with knowable data, the low-hanging fruit in your organization. What asset types do you have information on already (in spreadsheets, databases, hard-copy)? These would be assets like

- Computers
- Servers
- Laptops
- Handhelds
- Operating systems
- Software
- Licenses
- Peripherals
- Leases
- Contracts
- Service agreements

You may be tempted to track everything listed above and more. Succumbing to this temptation is not necessarily wrong; it all depends on what you want to accomplish with the data. To start, though, we recommend that you carefully select the data you will store in your asset repository and only track the data that will help you with the categories you defined above.

Asset lifecycle status

Underneath each asset resides additional layers of data. Assets have licenses, service agreements, leases, and the like, each with expiration dates, subscriptions, or other financially pertinent information. And each asset is likely tied to other assets. This information is tied to an asset's lifecycle.

Every asset has a lifecycle status. Even software has a lifecycle status. (Think back on the word processor or e-mail application you used years ago. It was the rage once, but as time went by, it became obsolete, and was ultimately surpassed by later revisions and newer technology.)

Common statuses include

- Ordered
- Received
- Available
- Assigned
- In repair
- Retired
- Disposed

Audit history

Audit history lets you view an asset's status changes chronologically. You can track changes made to an individual asset through the **History** tab in the ALM Web console. Through this tab, you can go to an asset and see a history of all the changes made to the asset, and generate a report on the history information.

Phase II — How will I know if I'm succeeding?

Identify the specific data that you need to see in reports to help you measure success and demonstrate it to your executive sponsors. This is the list of high-level details, not the low-level data sources. These reports should directly support the business goals defined in Phase I. In defining the report, you also need to define what values constitute success or failure—and understand that the success metrics will change over time.

It will be nearly impossible to define a single report that's able to interpret and massage all the data, so be ready to break a single success metric into the component parts that you will interpret. For example, determining license compliance might include some or all of these kinds of reports:

- Owned licenses, products and counts
- Managed products (a structured subset of total owned products)
- Assigned licenses (an administrative subset of managed products)
- Discovered instances of managed products

From the bottom up, these reports provide the data that you can then interpret to determine license compliance. Remember, this is still an almost abstract task—you're identifying what you need to know, not wrestling with existing tools to see what they can provide you.

Phase III — Does that data set exist, where is it, and who owns it?

Now you're finally looking at the tools, documents, and other data sources in your environment to see where the data that drives your specific reports is located, and who is responsible to maintain and update it. But you're not yet identifying the specific data points—you're identifying the data owners and asking them for information about their data repositories.

As a matter of practice you're best to start with the person who's responsible for the type of data you need and drill down to the tool from there. The data owner will contribute to your asset management strategy and may need to be involved in initial planning.

Keep in mind that a lot of data is available in the organization with a minimal amount of effort required to obtain it. Also, ALM has a synchronization feature to pull in data in several formats (2L, 2M CSV, ODBC, and XML, and the Advanced Shipping Notification files [ASNs] for Lenovo and Dell).

Phase IV — Identify the specific data points you need to track and what data source contains them

Now we get down to specifics. Based on the specific data sets identified in Phase III, identify:

- Which data points to track (start with the fewest possible and work up over time)
- What database or document contains each data point (and how often is it updated)
- Who owns each data source and what restrictions they place on access (they may only be willing to send you specific data but not grant access to the original source; you may be allowed to view but not alter the data; or you may be able to convince the data owner to let the asset system become the new primary repository for that datum)
- Identify new data points that need to be created by combining or transforming existing data points; clearly document the steps needed to transform the data (sources, rules, format of result)
- Identify required data for which you have no sources and investigate ways to get or create that data

You're not actually getting the data yet—you're clearing the technical and political hurdles necessary before designing forms and reports so you can minimize unproductive work and get early buy-in from the data owners and key stakeholders.

Understanding who owns the data and how it will be updated will determine the processes you need to implement to 1) protect the integrity of data change in the future, 2) determine how and how often external data needs to be synchronized to the asset repository, and 3) create new data in the system through a controlled, front-ended process that ensures the overall security and integrity of your asset repository.

Once you are pulling data in, ALM has tools to ensure its integrity. See Phase VI for more information.

Phase V — Design and build asset forms, supporting data lists, and state transition maps

With the source, type, and owner of each data point clearly identified, you can now use Asset Lifecycle Manager to build your forms and the elements that support them.

Important: You should start with a single asset type and refine it, then move on to the next one. If you try to do all forms at once, you significantly decrease the likelihood of completing the project, and you will not only burn out yourself, but your key stakeholders and executive sponsors as well. Take it stepwise and build over time.

In ALM, build out:

- Specific asset types or supporting resource types
- Dynamic or static data lists to populate form controls
- Tabs/pages to group related sets of attributes
- Lifecycle state transition maps to identify relevant asset state definitions; this will tend to change from form to form
- State transition requirements (which form fields become required data at each lifecycle state change)
- Desired manual or automated tasks to kick off automatically on asset record creation, update, or state change—you define the workflow now, but you'll hook it up in the next phase

The form creation process is a bit recursive—as you design one form you will discover data points that you want to track in other forms. Take the time to work through that and be comfortable, and understand that you can always come back next week or next month and add new attributes. Build a good form now and perfect it over time.

The form designer

The Asset Manager defines the forms used to request assets with the form designer.

For example, an end user needs to submit a request to initiate a business process. Such requests could include opening a help desk ticket, requesting a new asset, or submitting an expense report. Naturally, the request form contains fields to gather information pertinent to the fulfillment of the request.

The fields of the request form are defined in the designer console by the Administrator. The designer is a Windows application, and details on the creation, modification, and distribution of forms are found in the *ALM Designer's Guide*. ALM comes with many pre-defined forms covering many boilerplate processes. These forms can be used out-of-the-box, or the Asset Manager can add or delete the controls in them to capture any data that's important to you and your organization.

What your users will see (the Web console)

End users initiate asset procurement, redeployment, disposal, etc., through the Web console. The Web console can be loaded from a Web browser on any machine (no installation is required). It runs on either Internet Explorer or Firefox. The Web console is where employees go to fill out form requests that kick off workflows, to view the status of a request that has already been submitted, and to view all outstanding tasks owned by this employee. Managers have access to more features than an employee. In addition to all the tasks an employee can perform, a manager can also save service item instances, view the status of requests with in the manager's scope, and run reports.

“See” the asset lifecycle with the state transition map (STM)

The state transition map allows the asset administrator to graphically visualize the lifecycle of an asset type. The administrator can define what the states are for the asset type and how the asset transitions from one state to another. The administrator can also define what additional information needs to be collected for each transition. When changing the state of an actual asset type instance, the state transition map is used to make sure that the instance can only go to the appropriate states and that the user fills in all the required information.

The asset administrator can create a state transition map for each asset type. This provides a visual representation of the lifecycle of that asset type. Each state of the asset type is represented as an object in the map. Each transition from state to state is represented by a line between the objects. Each line is one way. When changing a state transition map that has live asset instances associated with it, the user needs to be prompted if asset instances have states that are no longer valid.

Phase VI – Create and execute synchronization jobs; define your update schedule

This is the big initial step where you will bring real data into your structured asset repository. To further refine your system you need real data in place. While you will want to create this work in a test lab or development sandbox, you will need to test it with real data from your environment.

- Create synchronization jobs for each asset type, supporting resource, and data source. You will find that there can be more than a dozen sources for a single asset type in some cases. Define sources, field mappings, matching criteria, and repository update rules.
- Plan the order of your synchronization tasks to perform bulk record creation first—usually from either purchase records or from the Management Suite inventory database—and then use subsequent tasks to refine existing records as much as possible.
- Execute your synchronization plan and populate the asset repository with data for your chosen asset type.
- Resolve synchronization errors.

Setting up synchronization tasks the first time will require a substantial commitment; updates take significantly less time.

Asset reconciliation and synchronization

Let's face it – the reliability of the data in your asset repository is only as good as the truthfulness/exactness of that data. The data may be entered correctly, but we all know that data is not a static entity; it is constantly changing, eroding, or just getting old. How is this river of data to be kept within its banks?

Changes to the asset system's representation of the "truth" need to be handled in a methodical way. The reconciliation tool can be thought of as a diff tool that shows the differences between the incoming data and the data currently in the system. The differences are shown where instance information is not the same. Records that exist in incoming data but not the asset system, and vice versa, are also noted for your review.

Reconciliation differs from ordinary import in that there is a methodical approach to the changes that are made in the target system. The end user is given a view of the changes that will be made to the incoming data. These generally fall into the following three categories:

- Updates to attributes on existing record matches
- New records being created in the target system
- Records that are in the target system but no longer show in the source system

The end user should be given the opportunity to examine each record that falls into this category and should be allowed to accept or reject the change on an individual record or in bulk.

ALM supports Advanced Shipping Notification files (ASN)

Large vendors often send their customers ASNs as orders are fulfilled. This allows the customer to get key information about IT assets before the assets actually arrive on premises. Typically this includes serial number, MAC address, model number, and other such information, and can be used to pre-prepare processes to install applications, patches, or anti-virus software before the assets reach their intended users.

ALM supports importing these files to either create or stub out asset records for the system. All relevant information in the ASN should be imported and stored in the appropriate asset record

You can specify how to handle record collisions. For each asset, an audit trail is created that records all changes made to the asset (creation, modification, and deletion). Each entry in the audit log will include the following information: who made the change, what was changed (which attribute and the old and new values), the date and time of the change, and an optional note entered by the user making the change.

Phase VII — Create reports; test against the full data set

Reports in ALM are about filtering data and structuring views to enable asset control and updates—they are not intended as a graphical reporting engine. So as you define report views, keep in mind not only external reporting requirements but also your daily work practices. You'll find that the views you need to support daily work practices contain a bit more data than accountability reports do, but daily work views will tend to directly feed your monthly reporting cycle.

You can't really define or refine reports until you have real data in your system. You may need to go back to Phases V and VI several times to refine the data that appears on your reports.

Many different users (asset administrators, managers, etc.) have a desire to create reports based on the assets/forms currently in the system that are potentially tied to the supporting documents (contracts, purchase orders, financial systems). These end users do not have the administrative Windows console installed on their desk and want to report from a Web console. These users would like to create reports based on canned views of the data so that they don't have to know the relationships between assets/forms and supporting documents. These users would select a predefined view to create a report from. The reports will be the starting point from which users will begin their tasks. From the report they may modify the data or invoke actions from specific rows within the report.

Phase VIII — Apply scopes to assets and supporting resources

Once you've tested reports against real data, you can now apply scopes that determine which assets your Web users will have access to. Refine and test the scopes to make sure that the right people are seeing the right information.

Users and role-based administration

There are several potential users of ALM. Each has different responsibilities. Their access to the various features of ALM can be restricted with role-based administration. The system administrator is a solution designer, designing and implementing forms, processes, and security. The IT asset manager imports assets and supporting resources (contracts, purchase orders, etc), and maintains the asset repository. Requesters are users who request assets from the system. The IT manager is a user who manages operations of IT. The IT technician is a user who provisions IT assets.

Role-based administration is a feature with its beginnings in LANDesk Management Suite in which ALM administrators can assign users or even other administrators to specific scopes, thus limiting the amount of data they can see. A scope defines the assets that can be viewed and managed by a user. A scope can be as large or small as you want, encompassing all of the assets in the database, or those of a single geographic location, department, or type. This flexibility lets you reduce the risk of incorrect or extraneous information being entered into your database by assigning access only to those who know a particular element of asset management (such as all Dell laptops or assets in the Dublin accounting office) and who can add, delete, or modify assets in that particular area.

Phase IX — Define micro-automation workflows; connect to asset change and state transition maps

While it seems non-intuitive to wait this long to build out your change update and state change automation, it's useful to wait until your primary data is in place before you implement change monitoring and automated task handling—it saves unnecessary clutter in audit and history files, and enables workflows to be planned against a mature database.

One such micro-automation workflow may involve the use of a barcode scanner. For example, a company's employees hired to administer assets use handheld barcode scanners for ease of use. The barcodes allow the user to query the asset and update the asset system without a lot of manual entry. There are several use cases for the bar code scanner: The dock workers use barcode scanners to receive assets on the dock, administrators or temporary workers use the barcode scanner to perform periodic inventory of all assets, and a variety of people use the barcode scanner to change the state of an asset. For each of these examples you'll define a workflow that defines how the actions fit into your work processes.

Phase X – Define macro-automation requests against the structured asset repository

In addition to providing asset managers with automation for common tasks, you can use macro automation to enable service delivery to your end users. This also helps create standardized front-end processes to ensure that new data entering your asset repository does so according to well defined rules policed by consistent, repeatable workflows.

- Define UI form and hook up to data sources
- Define workflow to control data handling and task routing
- Link form to workflow and set access controls through scopes on the UI form
- Test, test, test

Sample content

Included in ALM is a large amount of sample content, the Asset Contact pack. This content includes pre-fabricated workflows and forms to help you manage catalog items, vendor requirements, contract requirements, purchasing requirements, and so forth. You can modify the sample content to fit your needs.

Phase XI – Populate the standards catalog

The standards catalog lets the Asset Manager add, modify, and delete catalog items, adding notes, feedback, and supporting files to each catalog item, and specifying each feedback record by type (a global list). The Asset Manager can link each catalog item to a recommended vendor.

Each catalog item is assigned a catalog type. Types are fairly straightforward (desktops, laptops, servers, and furniture are catalog types). This is required to ensure proper instantiation of the asset record in the repository when the item is purchased (the system will populate catalog types based upon asset types that exist).

ALM supports reconciliation between the catalog and LDMS inventory, meaning that if a customer imports asset details into the ALM asset repository, the system will provide both an automated and manual process for matching existing inventory to standard catalog items.

Users can still request items not in the catalog (they can still be tracked in the catalog as non-standard catalog items).