Executive Summary

IT executives are clamoring for more control over the physical and service assets they manage. They are particularly interested in the owners, users, locations, and relationships between hardware, software, application, and media assets. Effective asset control and efficient delivery of information generates fewer incidents, faster mean-time-to-repair, and better data for root cause analysis. These actions also reduce impact of change, and improve financial management. Within the ITIL framework, this lifecycle process is called Service Asset and Configuration Management (SACM). This paper describes how SACM services can be defined, designed, and implemented to deliver on this value proposition.
# TABLE OF CONTENTS

- Executive Summary ................................................................. i
- Designing Service Asset and Configuration Management (SACM) .......... 1
- SACM Roadmap ........................................................................ 3
- SACM Service 1: Logical CMDB .................................................. 4
- SACM Service 2: Electronic Discovery ......................................... 5
- SACM Service 3: Lifecycle Data Overlay ..................................... 5
- SACM Service 4: Lifecycle Management (IMAC and Inventory) .......... 6
- Summary .................................................................................. 6
- About the Author ...................................................................... 8
- About CompuCom .................................................................... 9
Designing Service Asset and Configuration Management (SACM)

Why is SACM so hard to implement and organize? People are naturally more responsive to what they see (users, issues, requests), but need to consider and expand on what they know (hardware, software, applications, data, relationships). To illustrate, consider the typical transmission in your car. Most people see only a shift lever and assume “a gear or two must be involved.” Have you ever actually looked inside a modern transmission? Lots of gears — big and little, running forward and backward. So it is with SACM, the ITIL transmission that documents and manages how all of the ITIL services, processes, and functions work together. Successfully managing IT requires knowledge of the complete enterprise and understanding how the Configuration Management System enables the other ITIL processes and functions.

One path to success involves taking a lifecycle approach to SACM implementation:

- Plan for SACM processes to be installed one service at a time
- Prioritize SACM capabilities to align with business need and value
- Implement ITIL best processes enabled by appropriate technology
- Recognize when to switch from “what you see” to “what you know”
- Build on your knowledge to fine tune the infrastructure
The SACM process manages the service assets needed to support all of the other IT Service Management (ITSM) processes. SACM, and the data it controls, exists as the central element of a mature ITSM solution. SACM maintains accurate configuration information on the historical, planned and current state of the services and infrastructure.

Progressive SACM processes allow operational teams to achieve favorable outcomes:

- Manage asset and configuration item (CIs) records
- Validate CI updates regardless of the source of change
- Record physical and logical CI attributes and relationships
- Recognize dynamic CIs including software licensing and virtualized hardware
- Integrate complex overlays of CI attributes values from financial and lifecycle activity
- Consolidate, reconcile, and sort conflicts, precedence and priority so that only the best or right information is written as the source of truth

With the best design for implementing SACM, an organization can evolve from very limited capability to a fully optimized SACM solution. This is accomplished through a series of progressive SACM technical services that increase IT’s operational maturity over time. SACM technical services should be defined in a logical and progressive order for implementation. Mapping the services to ITIL process maturity definitions makes the services highly adaptable.

True success can only be achieved if business goals are met. However, each contributor to an organization’s success requires specific measurement. Either the ISO/IEC 20000 certification or the Tudor IT Process Assessment (TIPA) methodology can provide metrics and guidance for successful deployment of SACM Services. Figure 2, the TIPA Maturity Model and Definitions, shows six levels of process maturity that can be measured against requirement standards.
SACM Roadmap

As depicted in Figure 3, there are 10 SACM services and a foundation layer (Support Groups). This paper provides details on the first four services. SACM Services 1 through 4 cover the basic capabilities and requirements that IT organizations should assess for achieving business needs and alignment. These four services work much like a four-speed transmission when used together, bringing about a fundamental shift in how information is stored and processed. In some cases, values for a single data attribute can be captured from multiple sources. Establish data processing to identify and use information that is considered the “source of truth.”

A useful starting point would be to use the CMDB to advance your ticket classification process and establish Support Groups. Create a pick-list of generic CIs (e.g.: Windows 2008 Server) that can later be extracted and categorized. Enable Trend Analysis by CI to find patterns or focus areas. Initially load then maintain the list of CIs to help identify supportable or unsupportable assets by the service desk. This starts the process of tying incidents, problems, and changes to the CMDB, even when the CI is not live or the result of electronic discovery.
SACM Service 1: Logical CMDB

SACM Service 1 loads assets, IT services, applications and the relevant, related attributes within the Configuration Management Database (CMDB). Primary business applications and IT infrastructure must be defined and populated within the CMDB. Often, an initial data load with recurring manual or automated processes to update the CMDB for changes can accomplish this task. The SACM business analysts support this effort, which requires well defined processes for collection and collation. When deployed, the Configuration Items (CIs) records form the foundation and the CMDB builds upon this foundation.

SACM Service 1 supports the Service Desk during the routing and assignment of Service Operations transactions (e.g. Incident) versus a traditional category, type and item, or issue code classification schema. The use of CIs instead of traditional pick list items facilitates integration between Service Operations and Service Transition processes and functions. Reporting that was limited to Incident Management is now available in a consistent fashion across all processes with access to the CMDB.
SACM Service 2: Electronic Discovery

The primary objective of SACM Service 2 is the automated collection of infrastructure information. The ITSM tool should be configured in the organization’s network environment to discover in-scope, eligible, compatible, accessible, and available network-connected end-points. The discovered data is recorded in the ITSM Enterprise CMDB and includes live hardware and configuration attributes, installed software and configuration attributes, and relationships between discovered CIs, if these are supported by the ITSM tools.

The typical cost for Electronic Discovery is one-half to one-fifth the cost of conducting a physical inventory. When correctly deployed, Electronic Discovery of the networked devices is the most efficient and cost effective method available to capture configuration attributes related to the live infrastructure environment. While physical inventory potentially captures a larger population of devices, (e.g. non-IP, non-network connected), Electronic Discovery captures a more detailed range of attributes.

SACM Service 3: Lifecycle Data Overlay

SACM Service 3 involves the integration of the data from external sources for Lifecycle Data. The ITSM tool is configured to accept, reconcile, and record Lifecycle Data from organization-supplied electronic data sources. This integration enables collecting, storing and reporting on lifecycle attributes associated with the SACM inventory established in Service 2. Lifecycle data often contains attributes that result from lifecycle processing such as purchase order, invoice number and date, warranty date, department, owner and management assignments). If reliable lifecycle attributes are available, these will include CI attributes such as purchase, invoice, warranty, physical location, ownership, management, support, purpose, cost center, department, and contract association.

The previous service, Electronic Discovery, is limited to only those assets that are connected and eligible to produce a reliable scan; it cannot detect attributes that are not stored within an asset’s electronic registry — BIOS, WMI, or SNMP configuration files. The concept of reconciliation is critical to Service 3. Reconciliation defines CI precedence from multiple sources, and a reliable titling engine resolves differences in registry descriptions, such as manufacturer name that change over time. The Lifecycle Data Overlay combined with data recorded from Electronic Discovery expands the completeness of the SACM repository and enables a more effective SACM service.
SACM Service 4: Lifecycle Management (IMAC and Inventory)

Control of SACM items throughout the end-to-end lifecycle provides auditable transactions at each phase. SACM Service 4 (Lifecycle Management) requires that you shift your thinking about CIs and attributes from “what we see” to “what we know” (Figure 3). Lifecycle Management supports the alignment with governance and compliance frameworks such as HIPAA, SOX, CobiT, SAS 70, and others for management of change.

Historical and auditable transactions must exist in the SACM repository to track the movement of CIs through the phases of the lifecycle. When required by policy, lifecycle transactions are integrated with ITSM Change and Release Management events. SACM Service 4 includes tracking SACM inventory items from receipt into controlled locations for end-of-life processing and disposal, if needed. The successful execution and performance of SACM Service 4 is required to achieve the high degrees of accuracy and confidence required for the higher value functions of SACM (e.g. financial management). This includes the IT and business-level service supporting the business processes of the organization.

Summary

Successfully managing IT requires knowledge of the complete enterprise and understanding how the Configuration Management System enables the other ITIL processes and functions. As an organization matures in the use and requirements for SACM services, additional services (5-10) need to be considered to facilitate true business alignment and enablement. SACM, the ITIL transmission, documents and manages how all of the ITIL services, processes, and functions work together.

- **SACM Service 5: Service Request and Asset Fulfillment** enables requests of an organization’s specific, whole unit, software, CRU and FRU products and related services from an online hierarchical Service Catalog.

- **SACM Service 6: Contract Management** enables the recording of contracts, their terms and conditions, and the CIs (assets).

- **SACM Service 7: Business Services** maps business continuity to the Business Services, including the introduction of Availability, Capacity, and Continuity processes by business unit.

- **SACM Service 8: Financial Management** documents IT Service relationships, including the ability for forecasting and chargeback in financial management.
- **SACM Service 9: Agreements** enables the negotiation of desired vs. delivered performance of business services, enabling true business oriented-metrics instead of device or IT service-oriented metrics.

- **SACM Service 10: Optimization** Enables IT to business alignment through the improvement of business performance by strategic application of IT services.

The services described in this paper have been developed over the course of many years and in working with real organizations. During the course of numerous implementations, certain key success factors have emerged. Those factors have helped us shape the services and refine them over time. Additionally, we share just some of the lessons we’ve learned. The following does not include every lesson, of course, but summarizes the key points of this paper and serves as excellent reminders.

- Every SACM implementation is different, and is typically driven by business needs that determine priority, investment, and process. The priority of each remaining service adjusts based on the knowledge gained as you progress through the services.

- Executive sponsorship is required for true cross-functional service, as SACM touches all ITIL processes.

- Discovery should be the first source of data entry after Service 0. This process defines data formats and fields requiring normalization. The set-up of each service from multiple organizations across customer and service providers requires a vigorous data collection exercise.

- Be sure to document manual processes and good practices until stable; then prepare for automation.
About the Author

Brent J Knipfer is a Professional in Service Management (PSM CM), a Product Manager skilled in the Pragmatic Marketing framework, and a research and development engineer. Currently Director of ITSM Product Management at CompuCom, he is a business solution architect with both ServiceNow and Remedy multi-tenant service management platforms. He served as the Fusion 2010 Interactive Sessions Chair. He presented a Fusion 2009 workshop on the Executive Job Selection Campaign. He is the 2009 itSMF USA President’s award winner. He serves as the DFW LIG Program Chair for more than two years, served as President and currently serves on the Advisory Board. He is a past board member of DFW IEEE, Society of Technical Communicators and Institute of Management Consultants. Brent lives in Dallas, Texas, and can be reached at brent.knipfer@compucom.com. Additional contact information is available from a professional profile at www.linkedin.com/in/bknipfer.
About CompuCom

CompuCom, the leading IT outsourcing specialist, delivers IT your way. Our clients like working with us because they know that, with CompuCom, it’s all about you. Our unique ITSM strategy blends your data center, network, voice, and end user computing environments in an innovative fashion. This radically simplifies your IT, allowing you to focus on growing your business and serving your customers. We are highly regarded around the world for our balance of industry-leading tools, a pragmatic approach to best practices, and our highly skilled workforce. We are the perfect alternative to address the revolutionary IT transformations facing you today and in the future. More than a trusted advisor, CompuCom is your trusted doer. To learn more, visit www.CompuCom.com.

Learn more about CompuCom’s broad range of services and how seamlessly integrating support can help you drive greater business value from your IT infrastructure. Visit us online at CompuCom.com or call us at +1 800.225.1475 today.

© 2012 CompuCom Systems, Inc. All rights reserved. CompuCom is a registered trademark of CompuCom Systems, Inc. The names and logos of any companies or products mentioned herein may be the trademarks of their respective owners in the United States, Canada, and/or other countries. The information contained herein is subject to change without notice.