HOW TO AUTOMATICALLY POPULATE THE CMDB

Martijn Braamskamp // Head of Presales
»Achieving Compliance, Control & Cost savings for your IT.«
AGENDA

1. Softline Solutions
2. IT Asset Management
3. From ITAM to ITSM
4. Populate the CMDB
5. Service mapping
6. Asset Enrichment
7. Take aways
PORTFOLIO AT A GLANCE

IT Asset Management
- Hol: ITAM Strategy
- Hol: ITAM Assessment
- Hol: ITAM Business case
- ITAM Processes
- Define ITAM team
- SAM communication plan
- Publisher onboarding
- SAM as a Service
- Application Portfolio Management

License Management
- Audit Defense
- Audit runbook
- Compliance reporting
- Renewal optimisation
- Cloud Incentives (O365)

Specialist Resources
- Licensing skills
- Temporary staff

ITAM tooling
- Flexera
- Octopus Cloud
- ServiceNow
- Snow Software

Data Quality
- HW Asset verification
- Asset Status

SaaS / Cloud Management
- Discover SaaS apps
- Manage SaaS Spend
- Secure SaaS access
- Cloud Management
- Cloud spend optimization
IT ASSET MANAGEMENT
HOUSE OF ITAM®

ITAM MATURITY
(conform ISO/IEC 19770-1:2017)

1 – TRUSTWORTHY DATA

2 – LIFE CYCLE INTEGRATION

3 – OPTIMISATION

TIER 1

TIER 2

TIER 3

✓ COST SAVINGS
✓ CONTROL
✓ COMPLIANCE
HOUSE OF ITAM®

3 – OPTIMISATION

2 – LIFE CYCLE INTEGRATION

1 – TRUSTWORTHY DATA

ISO/IEC 19770-1:2017 MANAGEMENT PROCESSES

SERVICE LEVEL and RISK MANAGEMENT

CONTRACT MANAGEMENT
FINANCIAL MANAGEMENT

RELEASE and DEPLOY
MAINTAIN
RETIRE

ACQUIRE or DEVELOP
SPECIFY

CHANGE MANAGEMENT
SECURITY MANAGEMENT

DATA MANAGEMENT
LICENSE MANAGEMENT

ORGANISATION
LEADERSHIP
PLANNING
SUPPORT
OPERATION
PERFORMANCE
IMPROVEMENT

PLAN
DO
CHECK
ACT

✓ COST SAVINGS
✓ CONTROL
✓ COMPLIANCE
POP OUT – DATA & LICENSE MANAGEMENT

SERVICE LEVEL and RISK MANAGEMENT

- CONTRACT MANAGEMENT
  - RELEASE and DEPLOY
  - ACQUIRE or DEVELOP
  - DATA MANAGEMENT *

- FINANCIAL MANAGEMENT
  - MAINTAIN
  - SPECIFY
  - SECURITY MANAGEMENT
  - LICENSE MANAGEMENT **

** License Management
- ORGANISATION
- LEADERSHIP
- PLANNING
- SUPPORT
- OPERATION
- PERFORMANCE
- IMPROVEMENT

* Data Management
- ITAM INVENTORY VERIFICATION
- ORGANISATIONAL DATA
- INVENTORY MANAGEMENT DEPLOYMENTS
- INVENTORY MANAGEMENT ENTITLEMENTS
- IT ASSET IDENTIFICATION

** License Management
- DRIVING & MONITORING
- RECONCILIATION & ADVICE
- LICENSE CONFIGURATION

PLAN
DO
CHECK
ACT
THE BENEFITS OF INTEGRATING ITAM AND OTHER IT DISCIPLINES SUCH AS ITSM

- Better contract negotiations
- Faster resolution of issues
- High quality data in CMDB
- Better decisions (change/projects/services)
- More accurate costs & budgets
- Data Center consolidation
- Application portfolio management
- Detect software vulnerabilities

OUR STRATEGIC APPROACH: THE HOUSE OF ITAM®

SERVICE LEVEL and RISK MANAGEMENT

CONTRACT MANAGEMENT

FINANCIAL MANAGEMENT

RELEASE and DEPLOY

MAINTAIN

RETIRE

ACQUIRE or DEVELOP

SPECIFY

CHANGE MANAGEMENT

SECURITY MANAGEMENT

DATA MANAGEMENT

LICENSE MANAGEMENT

ORGANIZATION

LEADERSHIP

PLANNING

SUPPORT

OPERATION

PERFORMANCE

IMPROVEMENT

PLAN

DO

CHECK

ACT
FROM ITAM TO ITSM
STRATEGIC ITAM APPROACH

SUPPORTED BY OUR TECHNOLOGY PARTNERS
REFOCUSSING ITAM THROUGH THE LENS OF ITSM

**IT ASSET: SERVER**
- Make
- Model
- CPU
- RAM
- OS
- Etc.

**CI: SERVER**
- Technical
  - Hardware, software
- Ownership
  - Responsible Person
  - Purchase Date
  - Warranty Info
  - Location
- Relationship
  - Details about how this CI contributes to the delivery of a service which ultimately brings value to the business
HOW TO POPULATE THE CMDB FROM AN ITAM PERSPECTIVE
HOW TO POPULATE THE CMDB WITH ASSET DATA

- Manually….
- Integrate with existing data sources
  - SCCM
  - Altiris
  - SAM tooling (Flexera or Snow Software)
- Using Automated Discovery
  - BMC ADDM
  - HP DDMi
  - ScienceLogic
  - ServiceNow Discovery
OPTION 1: MANUALLY

OUR COMPUTERS ARE DOWN, SO WE HAVE TO DO EVERYTHING MANUALLY...
OPTION 1: LEVERAGE EXISTING DATA SOURCES

- Microsoft SCCM
- Altiris Client Management Suite
- IBM BigFix
- SolarWinds
- SAM tooling (Flexera or Snow Software)
LEVERAGE EXISTING DATA SOURCES – POSSIBLE DATA QUALITY ISSUES

1. Inconsistent data
2. Duplicate data
3. Irrelevant data
4. Incomplete data
5. Out-of-date data
LEVERAGE EXISTING DATA SOURCES - DATA SOURCE NORMALIZATION
LEVERAGE EXISTING DATA SOURCES - DATA SOURCE NORMALIZATION

Example Data Sources

- Catalog
  - Manufacturer
  - Product Family
  - Product Name
  - Version / Model
  - Edition

Example Consumers

- Hardware & Software Assets imported from numerous aggregated sources
- Over 50 Extractors Available
- Over 80M Deterministic Rules
- Normalizing identifies products using Technopedia and flags irrelevant ‘noise’
- Normalizes extracted data to the Technopedia catalog
- Normalized inventory is categorized by Technopedia’s category structure
- Data is consolidated and accessible via REST API or SQL

Table:

<table>
<thead>
<tr>
<th>Collect</th>
<th>Classify</th>
<th>Clean</th>
<th>Categorize</th>
<th>Consume</th>
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<td>Hardware &amp; Software Assets imported from numerous aggregated sources</td>
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<td>Normalize</td>
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<td>Data is consolidated and accessible via REST API or SQL</td>
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Multitude of Integrations

Collect

Classify

Clean

Categorize

Consume

Example Consumers

- servicenow
- TANium
- casper
- solarwinds
- IBM
- Hewlett Packard Enterprise

Example Data Sources

- Flexera
- servicenow
- TANium
- casper
- solarwinds
- IBM
- Hewlett Packard Enterprise
LEVERAGE EXISTING DATA SOURCES

ADVANTAGES
- Use data that is already there
- Knowledge already in-house
- One source of normalised data for multiple tools
- Easy to implement

DISADVANTAGES
- Risk of poor data quality
- Possibly additional solution (Data Platform) to implement
- Still have to maintain data sources
- No integration with Cloud platforms such as AWS
OPTION 3: AUTOMATED DISCOVERY

1. **Scan**
   - Scan defined IPs ranges
   - Identify active devices and port numbers

2. **Classify**
   - Determine device type
   - Gather additional info via type-specific pattern

3. **Identify**
   - Collect additional ID info about classified devices
   - Check CMDB for matching CI

4. **Explore**
   - Read devices for detailed info
   - Process results and update CMDB
OPTION 3: AUTOMATED DISCOVERY

ADVANTAGES
- No other data sources or discovery needed
- More real time
- More intelligent than importing plain data
- Horizontal discovery & optional “vertical” discovery
- In case of ServiceNow: Creates Software Discovery Models for SAM Pro

DISADVANTAGES
- Additional solution to implement
- $$$
HORIZONTAL MAPPING VS. VERTICAL MAPPING

Infrastructure Discovery By Domain

Load Balancers
Web Servers
App Servers
Data Stores
Virtual Servers
Servers

Application Dependency Mapping

Load Balancers
Web Servers
App Servers
Data Stores
Virtual Servers
Servers

Service Dependency Mapping
WHY SERVICE MAPPING IS NEEDED

THE NETWORK HAS BEEN DOWN ALL MORNING, BUT WE FOUND THE PROBLEM.

SOME IDIOT UNPLUGGED THE SERVER SO HE COULD CHARGE HIS PHONE.

SO, THAT PROBLEM HAS BEEN SOLVED.

GREAT. NOW CAN YOU HELP ME FIND MY LOST PHONE?
SERVICE MAPPING WHEN LEVERAGING DATA SOURCES

Advantages
- Not effected by success / speed of asset discovery

Disadvantages
- No automated vertical mapping possible
- Requires additional tools and scripts
- Two weeks needed to map one service
- Requires knowledge of SME’s
- Difficult to maintain due to ongoing changes
SERVICE MAPPING USING DISCOVERY TOOL

Entry Point
URL, connection parameters, etc.

Host detection
Connection to target machine, discovery CI information

CI Identification
Identify the application based on information from entry point

Connection Discovery
Discover configured connection to other applications
Advantages
- Reduces effort to create service maps
- Reduces effort to maintain service maps
- Results = reduced downtime of services due to better root cause analysis

Disadvantages
- Requires additional tooling $$$
## ASSET ENRICHMENT – USING FLEXERA DATA PLATFORM

### Example Data Sources

- **Hardware & Software Assets** imported from numerous aggregated sources.
- **Over 50 Extractors Available**
- **Over 8M Deterministic Rules**
- **2.1 Million Products**
- **2-Tier Taxonomy**
- **9 Content Packs**
- **Multitude of Integrations**

### Example Consumers

- **Collect**
  - **Normalize**
  - **Sort**
    - Aggregation
    - Identification
    - Deduplication
    - Filter
    - Relevant
    - Irrelevant
  - **Catalog**
    - Manufacturer
    - Product Family
    - Product Name
    - Version / Model
    - Edition
  - **Contextualize**
  - **Consume**

- **Classify**
  - **Normalize**
  - **Taxonomy**
    - Category
    - Sub-Category
    - Lifecycle & Suppt
    - Windows 10
    - InfoSec
    - Open Source
    - Win Server Comp
    - Hardware Specs
    - Virtual Comp

- **Clean**
  - **Normalized**
  - **Normalized**
  - **Technopedia**
  - **Technopedia**

- **Categorize**
  - **Normalized inventory is categorized by Technopedia’s category structure**
  - **Technopedia Content Packs**
  - Data is consolidated and accessible via REST API or SQL
## ASSET ENRICHMENT – LIFE CYCLE INFORMATION

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(SOFTWARE) ASSET ENRICHMENT – USING SERVICENOW SAM PRO
ASSET ENRICHMENT – USING SERVICENOW SAM PRO

Software Life Cycle information
» KEY TAKE AWAYS
KEY TAKE AWAYS

- Multiple ways to populate a CMDB
- IT Asset Management can be a great start!
- Best option depends on what information you already have and what kind of information you require
- Beware of poor data quality!
- Automated service mapping might have impact on your decision
- Regardless of your choice, data can always be enriched in a later stage
- Encourage communication between ITAM and ITSM