A common situation in Enterprise IT is to have an ERP application to track hardware and software purchases (fulfilling the needs of the Business Department), and at the same time an inventory/monitoring application (operated by and for the needs of the IT Department).

Often, these software packages are not integrated, and multiple workflows are required to manage the full hardware and software life cycle. Likewise - and even more important for some companies - management of operational costs and usage billing is decoupled from the other procedures.

We thus explored integration between several open source applications related to Cloud Computing, ERP and IT asset management. We can now provide complete solution for the following problems:

1. purchase/accounting workflow
2. automatic collection of hardware/software inventory
3. discovery and inventory of SNMP devices (routers, printers)
4. management of software licenses
5. usage and process monitoring
6. ticket/help desk requests
7. resource billing
8. statistics and charts
9. integration with SlapOS Master for cloud management

ERP5 as IT asset management backend

A first approach to solve all the problems listed above consists of combining ERP5 as a backend platform with FusionInventory agent. ERP5 keeps track of purchase, location, ownership, accounting, etc. while the FusionInventory agent gathers information about IT devices.

The agent is available for Linux (most distributions), Windows (95 to 8), OSX (10.3 to 10.7), Solaris, Android, Open/Free/NetBSD, HP/UX, AIX. It can detect hardware components, storage devices, network configuration, running processes and users, and installed software packages. The data can be locally saved in XML format or uploaded to an inventory server. Nearby SNMP devices are probed and added to the inventory as well.

The ERP5 backend provides Helpdesk management through tickets, inventory management, purchase, accounting, base data management, etc. with consistent integration.

ERP5 integration with GLPI, OCS and OTRS

In order to leave maximum flexibility to our customers or to benefit from extensive ITIL support, integration with existing IT management open source applications can be considered. Such applications include GLPI, OCS Inventory, OTRS.

The integration approach we have considered is based on the definition of link templates to the third party application: link template for IT inventory or link template for Helpdesk.

This simplicity of the integration even allows multiple IT management applications to be integrated with ERP5. A group of companies may even implement a single ERP5 system yet use different IT management applications in different sites.

SlapOS and IT Inventory

SlapOS cloud platform acts as a registry of computers also known as nodes. Allocation of cloud capacity is achieved by looking up in the node "inventory" which one provides enough capacity. There are obvious similarities between what SlapOS does and what an IT inventory management system does. Would it be possible then to have a single system?

Answering this question depends on the context.

For a private SlapOS cloud, it makes sense to integrate IT Inventory management with SlapOS. Because SlapOS repository is based on ERP5, this is quite easy: include FusionInventory as a SlapOS software release and follow the same approach as we described in "ERP5 as IT asset management backend".

It can also be desirable for safety, resilience or other reasons that SlapOS does not collect detailed information of cloud nodes. This is the case of a public cloud designed for resiliency that tries not to disclose the location of its nodes. Storing precise hardware details, their physical location, owner, etc. in a separate application rather than inside SlapOS is a better approach in this case. Even better for resilience, we should consider managing inventory with multiple applications in multiple databases by different organizations. The link templates approach for integration provides a very good solution to this case: Every user can define the URL of his or her inventory application independently of other users. This feature could even become standard in future versions of SlapOS.
Demo Video

We created a demo video on youtube, which shows how the different applications are integrated.

References

ERP5 - http://www.erp5.com/
SlapOS - http://www.slapos.org/
OCS Inventory NG - http://www.ocsinventory-ng.org/
GLPI - Gestionnaire libre de parc informatique -http://www.glpi-project.org/
FusionInventory agent - http://www.fusioninventory.org