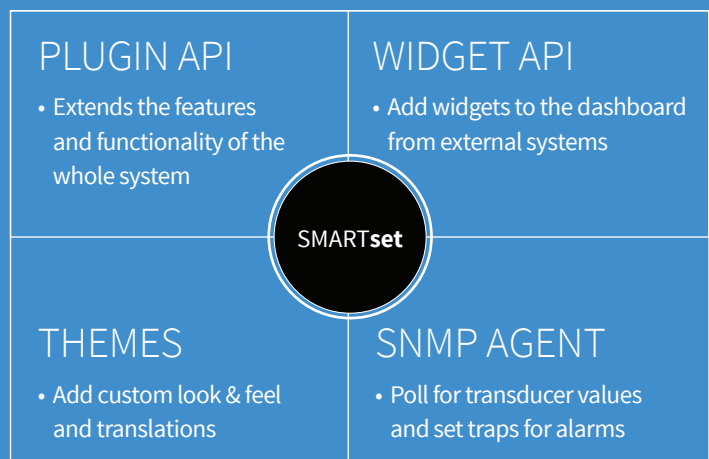


## SMARTset INTEGRATION

### EXTENDING SMARTset WITH RICH CONTENT

**SMARTset** has a fully featured plugin system based on the industry standard **OSGi** framework. This allows developers to integrate new features into **SMARTset** or provide custom widgets for the dashboard system. The plugin framework is fully integrated with the **SMARTset** Licence Management function allowing plugin developers to licence **SMARTset** extensions.



### SMARTset INTEGRATION:

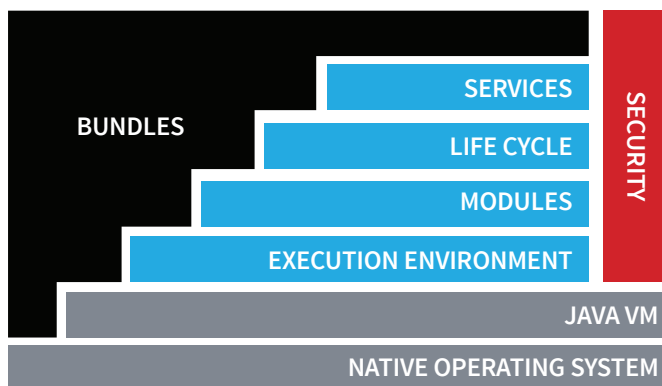
- **SMARTset** includes two out-of-the-box plugins. These plugins provide the ability to integrate with popular Asset Management and Issue Management systems giving a seamless overview of facilities.
- The **SMARTset** Asset Management System (AMS) plugin shares data between **SMARTset** and an AMS minimising data entry, saving setup time and improving data accuracy. The plugin provides import and validation of shared data and has the capability to view detailed information held about the asset within the AMS. This includes high-resolution images of cabinets / racks within **SMARTset** (providing the Asset Management system makes the images available).
- **SMARTset** integrates with popular Issue Management Systems (IMS). **SMARTset** uses the IMS as a source of event and issue information but does not interact with the Issue Management workflows thus minimising the impact on current

systems. **SMARTset** uses the data in a variety of ways including explaining why alarm conditions are triggered. Issue Management events can be seen on reports within **SMARTset** or within the various graphing functions.

- **SMARTset** runs its own SNMP agent that allows external systems read-only access to data using the SNMP protocol. All current readings are available and **SMARTset** can be configured to send Alarm notifications to a remote SNMP Manager using either v1 trap or v2 trap notification messages.
- **SMARTset** allows developers to extend the dashboard visualisations through the use of a JSON API. This gives third parties the ability to add custom widgets to the system which users can add to their own dashboards.
- Administrators can also manage the look and feel of **SMARTset** through a custom theme.

## SMARTset PLUGIN FRAMEWORK

- SMARTset extends a popular plugin framework based on the OSGI industry standard. The extensions enable a developer to fully integrate new features within SMARTset. The plugins are written in Java and are packaged as an individual jar file that is uploaded into SMARTset via the Administration UI.
- Internally SMARTset provides a set of base services to assist plugin developers. This creates access to SMARTset entity data and reading values. Safety checks are inbuilt to only enable plugins that conform to the standards required by the framework.

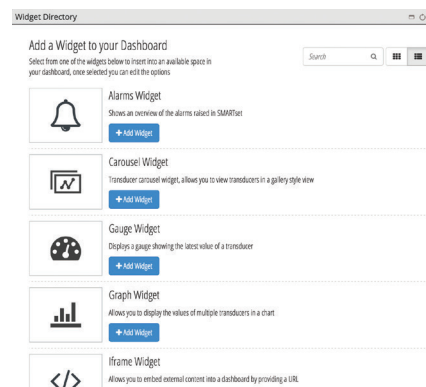


## SMARTset SNMP AGENT INTERFACE

- SMARTset adds the capability to act as an SNMP agent, fielding requests for data from a remote system. This data includes information about sites, rooms and transducers as well as the general health of the currently running SMARTset instance.
- SMARTset also allows the configuration of an SNMP V1 Trap or V2 Trap Notification sender. When enabled, SMARTset will send a notification message to a remote SNMP manager informing that system of the alarm condition.

## SMARTset WIDGET API

- SMARTset allows external developers to add widgets to the system from external sources.
- A developer simply has to add a URL end-point to SMARTset that tells the system where it can find the configuration of the widget it wants to integrate.
- The configuration is a JSON representation of all the properties which need to be provided by the end user. Included in the specification is a definition of where the widget can get its content, the properties being sent with the request as POST parameters.



## SMARTset THEMES

- SMARTset allows Administrators to upload their own styling for the entire application.
- A theme can override the look and feel of the UI, including logos and icons. This allows the complete re-skinning of the system to reflect corporate branding guidelines.
- The themes also allow partners and resellers to re-brand the application as their own.

## TECHNICAL DETAILS

- For the Nlyte Asset Management integration, Nlyte 7.7.100 is required
- Any new external plugins must be written in Java 1.8 as a minimum and be packaged as a self-contained jar file



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