Attributes

Overview

No matter how careful the system is designed to store data initially eventually there will be a time when extra pieces of information will need to be saved. Data enrichment is part of a natural system life cycle. The platform uses **Object-Attribute-Value** (OAV) model that allows to add unlimited number of additional data properties to extensible objects at runtime without any coding.

Typical example would be: a marketing team wishes to capture new customer preferences for contacting them by telephone. For this a new attribute definition would be created in CUSTOMER group. Then the code of this attribute definition will be added to registration form attributes configuration and profile attributes configuration for a given shop. As a result registration and profile management pages are updated with no coding, no deployment, it is ready to use as soon as the configurations are applied and marketing team can use the new customer preference to make more sales.

The platform identifies a number of extensible objects whose attributes serve various purposes. These objects are identified by attribute group. A rough depiction of how attributes are grouped and used can be seen in diagram below.

Admin App (6:18)
Play
Basics: Attribute Management

OAV mechanism works especially well when applied to product data modelling. Different product types can be modelled to have various attributes which can be shared or be unique to specific products. The mechanism is very generic and is fully controlled from Admin app providing generic no-coding required approach to business functions such as filtered navigation, search, product specification view and product comparison. For detailed discussion of the topic see Product information management (PIM).

Attribute groups

Attribute groups specify attributes that belong to specific extensible object in the system. This grouping is done for better management of attributes that belong to different functional parts of the system. Out of the box the platform provides the following groups:

Attribute Group	Purpose	Where to configure
SYSTEM	extends the platform itself to contain arbitrary parameters	System > Preferences section of the admin app
SHOP	extends specific shop instance usually to provide default configurations and adjust behaviour of business functions	Attributes/Images tab of the shop editor

CATEGORY	extends master catalog categories and content objects in the system	Attributes/Images tab of the category/content editor
CUSTOMER	extends customer profile information to enhance quality of data about the customer	Attributes/Images tab of the customer editor, for registration and profile forms configuration see this cookbook
BRAND	extends brand data	Attributes/Images tab of the brand editor
PRODUCT	extends product and SKU information to provide attributes that can be used by product type definitions to create product specifications and facilitate filtered navigation	Attributes/Images tab of the product/SKU editor
ADDRESS	defines address capture forms	Configured in the attribute definitions see this cookbook
CONTACTFORM SaaS	defines contact forms (e.g. contact us, newsletter sign up)	Configured in the attribute definitions see this cookbook
WIDGET	define widgets available to select on dashboard, system managed and are used to provide information about the widgets	Configured in the attribute definitions

Attribute groups API is generic, therefore custom implementation can define own groups for configuring specific settings

Attribute Management

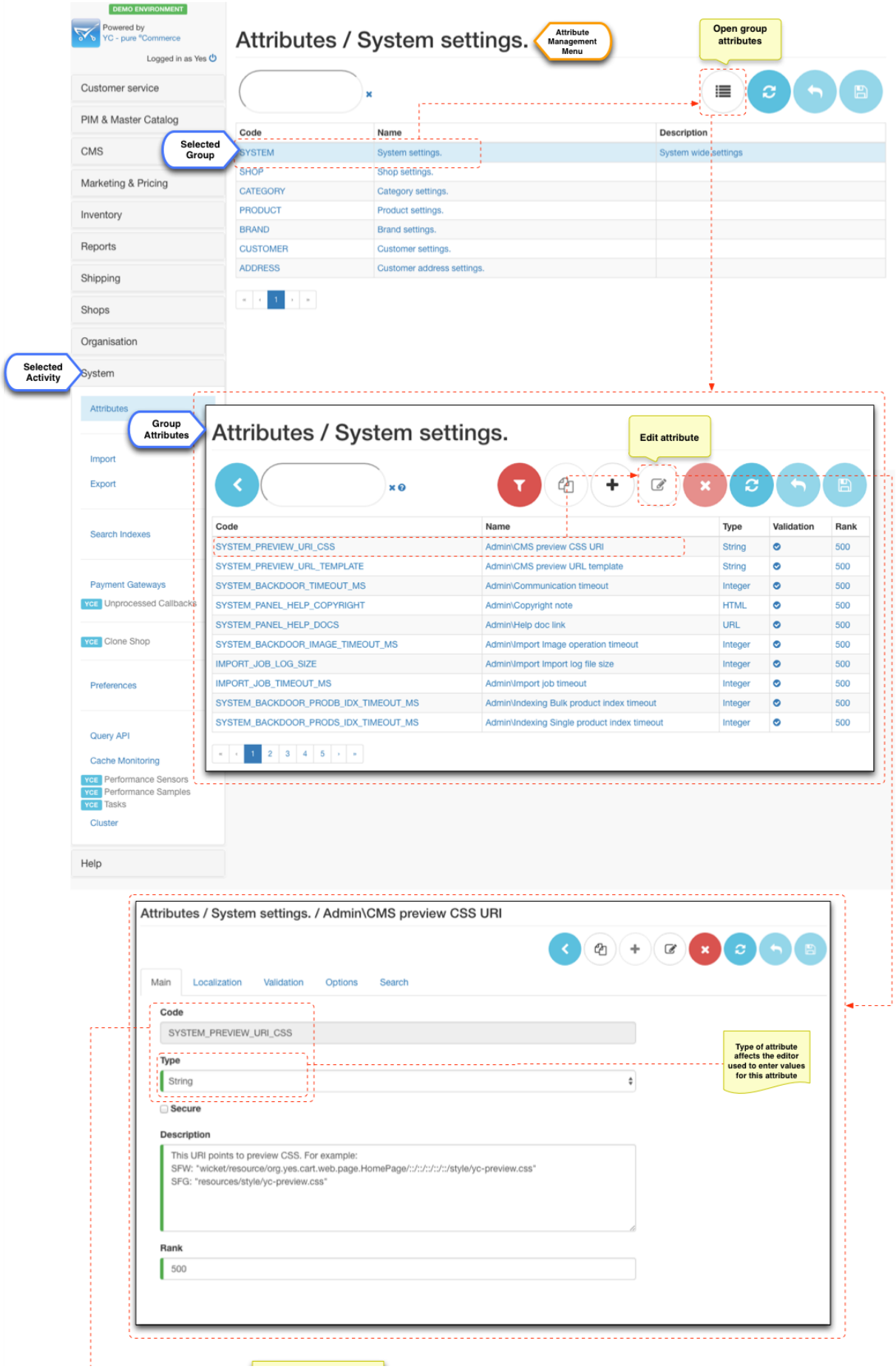
Configuring attributes is a simple task and usually involves creating an attribute definition in **System > Attributes** section. Basic details required are declaration of a unique attribute code and type of the value for this attribute. After an attribute is created its code cannot be changed.

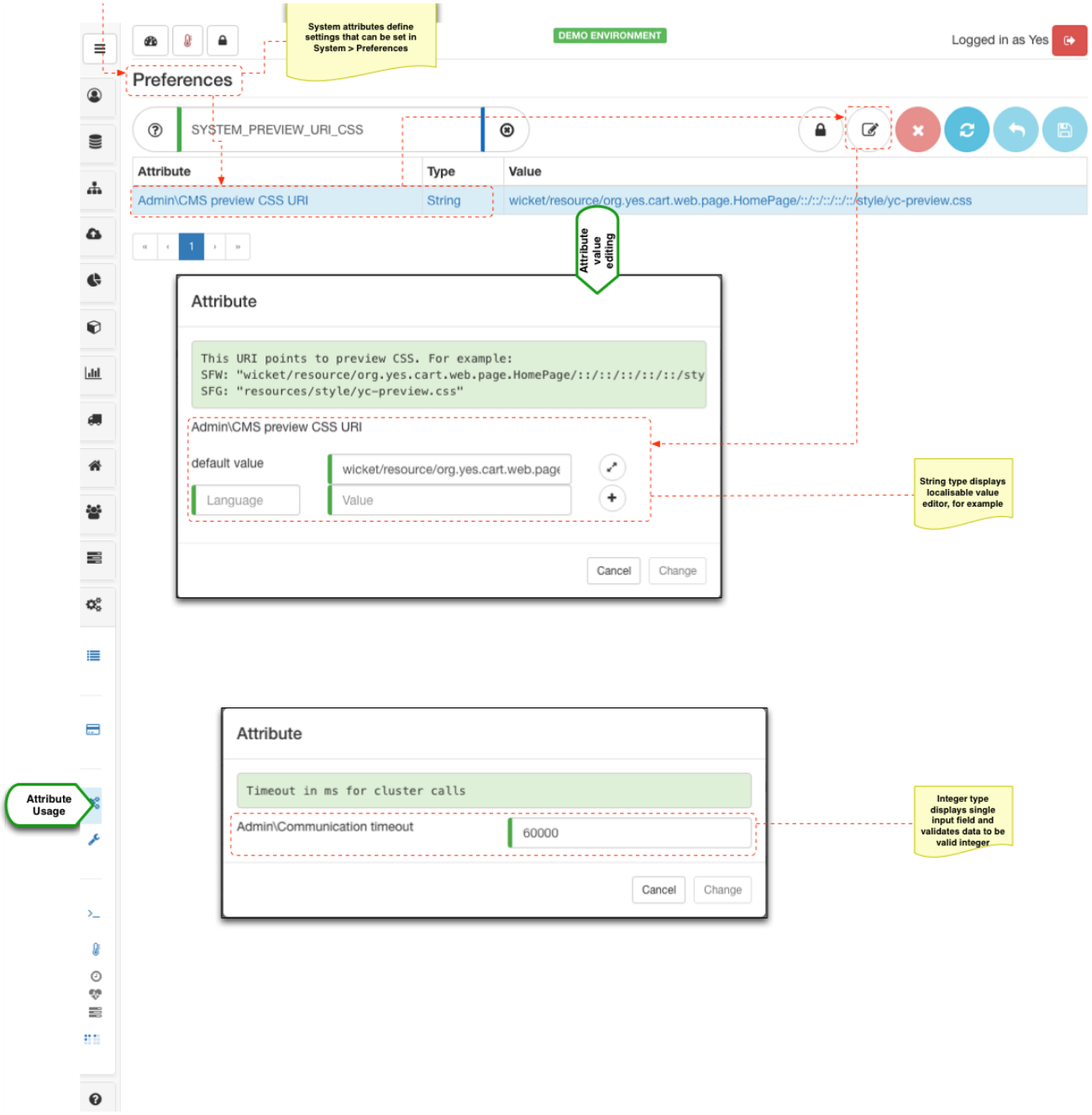
Usually attributes are created for a specific purpose such as additional attributes already supported by the platform, new attributes for custom implementations and meta data. When and how the attribute is created and used will largely depend on the business requirements.

In most cases business users will only need to create PRODUCT attributes to configure product types. For example product type of "Notebook" may need attributes such as "RAM", "HDD specification" and "CPU speed", where as product of type "Dress" would need attributes such as "color", "size" and "collection".

The best way to think about attributes is as a description of properties of an object. For example when defining "color" attribute for PRODUCT we may specify it as a String property because it is just a colour name but that can be translated into various languages, so it has to be localisable. But we always search for specific colour so every value that we save e.g. "red", "white" and so on will be a specific match in terms of search. On the other had if we are talking about "RAM" we may specify this as a number (e.g. number of GB), which would allow us to search for notebooks that have RAM of more than 4GB but less than 8GB and so on. For advanced attributes we can even specify validation expression. For example when configuring "email" attribute for CUSTOMER we can set a regular expression rule to tell the system which emails are valid and thus prevent customers from entering bogus emails. There are many use cases and the platform provides a flexible mechanism to cover this.

Specifying attribute type will also enable some of the features in Admin app. Thus for specific value types a dedicated editor will be used. For example String would use a localisable component to capture the value, Integer will use a single input with validation for whole number values and Image will have an upload button and a preview for existing value.


DEMO ENVIRONMENT
Powered by
YC - pure *Commerce
Logged in as Yes
Customer service
PIM & Master Catalog
CMS
Marketing & Pricing
Inventory
Reports
Shipping
Shops
Organisation
System
Attributes
Import
Export
Search Indexes
Payment Gateways
Unprocessed Callbacks
Clone Shop
Preferences
Query API
Cache Monitoring
Performance Sensors
Performance Samples
Tasks
Cluster
Help
Selected Activity
Group Attributes
Selected Group
Attribute Management Menu
Open group attributes
Attributes / System settings.
Code
Name
Description
SYSTEM
System settings.
System wide settings
SHOP
Shop settings.
CATEGORY
Category settings.
PRODUCT
Product settings.
BRAND
Brand settings.
CUSTOMER
Customer settings.
ADDRESS
Customer address settings.
Edit attribute
Attributes / System settings.
Code
Name
Type
Validation
Rank
SYSTEM_PREVIEW_URI_CSS
Admin\CMS preview CSS URI
String
500
SYSTEM_PREVIEW_URL_TEMPLATE
Admin\CMS preview URL template
String
500
SYSTEM_BACKDOOR_TIMEOUT_MS
Admin\Communication timeout
Integer
500
SYSTEM_PANEL_HELP_COPYRIGHT
Admin\Copyright note
HTML
500
SYSTEM_PANEL_HELP_DOCS
Admin\Help doc link
URL
500
SYSTEM_BACKDOOR_IMAGE_TIMEOUT_MS
Admin\Import Image operation timeout
Integer
500
IMPORT_JOB_LOG_SIZE
Admin\Import Import log file size
Integer
500
IMPORT_JOB_TIMEOUT_MS
Admin\Import job timeout
Integer
500
SYSTEM_BACKDOOR_PRODB_IDX_TIMEOUT_MS
Admin\Indexing Bulk product index timeout
Integer
500
SYSTEM_BACKDOOR_PRODS_IDX_TIMEOUT_MS
Admin\Indexing Single product index timeout
Integer
500
Attributes / System settings. / Admin\CMS preview CSS URI
Main
Localization
Validation
Options
Search
Code
SYSTEM_PREVIEW_URI_CSS
Type
String
Secure
Description
This URI points to preview CSS. For example:
SFW: "wicket/resource/org.yes.cart.web.page.HomePage/::/:/:/::/style/yc-preview.css"
SFG: "resources/style/yc-preview.css"
Rank
500
Type of attribute affects the editor used to enter values for this attribute



Attribute code

Attribute code should only contain **latin letters**, **numbers** and **underscore** characters. It is advisable to set code as a meaningful name (e.g. CART_MAX_ITEM_SIZE rather than ATTR0001). This will make management of the system easier in the long run (e.g. when it comes to imp ort).

Value type

The following product types are supported by the platform:

Type	Data type	Admin editor	Example	Default validation
String	java.lang.String	Localizable string	any random string	✗
SecureString	java.lang.String	Localizable string + masking in table view	any random string	✗
URI	java.lang.String	Text input	file://path/to/file	✗
URL	java.lang.String	Text input	http://mydomain/path/to/file.html	✗
Image	java.lang.String	Image upload + preview	image.png ⚠ Uploaded images will be converted using PNG or JPG encoder only	*.png, *.jpg, *.jpeg
File	java.lang.String	upload + preview	documentation.pdf	✗
SystemFile	java.lang.String	upload + preview	documentation.pdf	✗
CommaSeparatedList	java.lang.String	Text area	Value1,Value2,Value3	✗
Phone	java.lang.String	Text input	+3(096)5555555 555-55-55	^[\+]?[\(\)0-9\-]+$
Email	java.lang.String	Text input	bob.doe@domedomain.com	^[_a-z0-9-]+(\.[_a-z0-9-]+)*@[a-z0-9-]+(\.[a-z0-9-]+)*(\.[a)$
HTML	java.lang.String	Text area	piece of html	✗
Float	java.lang.Float	Text input	10.2 -10.2 10	^(([\-][0-9]+)|([0-9]*))[\.]?[0-9]+$
Integer	java.lang.Integer	Text input	10 -10	^[\-]?[0-9]+$
Boolean	java.lang.Boolean	Checkbox	true false ⚠ either **true** or **false**	(true|false)
Date	java.time.LocalDate	Text input	2014-04-29 ⚠ For example 1st February 2010 would be **2010-02-01**.	^[0-9]{4}\-([0][1-9]|[1][0-2])\-([0][1-9]|[1-2][0-9]|[3][0-1])?$
DateTime	java.time.LocalDateTime	Text input	2014-04-29 14:42:55 ⚠ For example 1st February 2010 1:45pm would be **2010-02-01 13:45:00**. Time part is optional	^[0-9]{4}\-([0][1-9]|[1][0-2])\-([0][1-9]|[1-2][0-9]|[3][0-1]) ([0][0-9]|[1][0-9]|[2][0-3]):[0-5][0-9]:[0-5][0-9])?$
Timestamp	java.time.Instant	Text input	1462372975000 ⚠ Unix timestamp	^[\-]?[0-9]+$
Locked	java.lang.String	read only		✗

Validation

Validation regular expression and message allow to give hints to Admin app editors so that more advanced validation can be performed as opposed default ones for given type.

Customer facing attributes e.g. CUSTOMER attributes that participate in registration/profile forms or ADDRESS attributes that participate in address capture forms will use the validation expression on storefront and corresponding error message will be displayed to customers.

Search options

Option	Purpose
Store value in index	Saves value in search index as is. This makes the index larger in size but enables to use this value in CMS on category browsing and search pages
Value is searchable	Analyses the value and enables searching via search box by this value using normal, partial and fuzzy searches
Values is primary key (exact matches)	Strict version of "searchable" which forces exact matches only (e.g. useful for SKU or model numbers)
Value is navigatable	Instructs the system to create a facet index for this value and enable auto generation of filter navigation blocks