



WSRowObject



An individual object in a network.

Methods that return this type of object may actually return a derived class, for example a [WSNode\(?guid=Innovyze_Exchange_Classes_ICM_wsnode_html\)](#) for nodes or [WSLink\(?guid=Innovyze_Exchange_Classes_ICM_wslink_html\)](#) for links.

Methods:

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[] (Get Field)

```
#[(field)] => Any
```

EXCHANGE, UI



Returns the value of a field, using hash-like syntax. May return a simple value, or a [WSStructure\(?guid=Innovyze_Exchange_Classes_ICM_wsstructure_html\)](#) if the field is a structure blob.

```
puts node['node_id']  
=> 'Badger'
```

Parameters

Name	Type(s)	Description
field	String	The name of the field.

[]= (Set Field)

```
#[(field)]=(value) => void
```

EXCHANGE, UI

Sets the value of a field, using hash-like syntax. The value must be an appropriate type for the field, and this cannot be used to set structure blobs.

```
node['node_id'] = 'Badger'
```

Parameters

Name	Type(s)	Description
field	String	The name of the field.
value	Any	The value, must be an appropriate type for the field.

_* (Get Tag)

```
#_* => Any
```

EXCHANGE, UI

Reads the value of a tag, which are temporary values added to the object during the script.

```
puts mo._badger
⇒ 'Penguin'
```

_*= (Set Tag)

```
#_*= (value) ⇒ void
```



EXCHANGE, UI

Sets the value of a tag, which are user defined temporary values added to the object during the script. The name of tags can contain only alphanumeric characters (i.e. letters and numbers).

```
mo._badger = 'Penguin'
```

autoname

```
#autoname ⇒ void
```

EXCHANGE, UI

Sets the ID of this object using the current network autoname convention.

category

```
#category ⇒ String
```

EXCHANGE, UI

Returns the category name of the object e.g. `_nodes`, `_links`.

contains?

```
#contains(other) ⇒ Boolean
```

EXCHANGE, UI

If this object is a polygon, checks if another WSRowObject is inside it. This is effectively the inverse of the `#is_inside?` method.

Parameters

Name	Type(s)	Description
other	WSRowObject	The other object.
Return	Boolean	If the other object is inside this polygon.

delete

```
#delete => void
```

EXCHANGE, UI



Deletes the row object. This is immediate and does not require the `#write` method.

field

```
#field(name) => WSFieldInfo?
```

EXCHANGE, UI

Returns the [WSFieldInfo \(?guid=Innovyze_Exchange_Classes_ICM_wsfieldinfo_html\)](#) object for a given field name.

This only returns information about the named field such as it's data type, not any data associated with this particular object.

gauge_results

```
#gauge_results(field) => Array<Float>
```

EXCHANGE, UI

Returns an array of values for the given results field name, at all gauge time-steps. The field must have time varying results.

If the object or field does not have gauge results it will return the regular results.

If the simulation results time-step multiplier is 0, this method will return no results, even if gauge results are available in the user interface.

Parameters

Name	Type(s)	Description
field	String	
Return	Array<Float>	

id

```
#id => String
```

EXCHANGE, UI

Returns the ID of the object.

If the object has a multi-part primary key (such as a link) then the key will be output with parts separated by a `.` character, similar to accessing the OID field in SQL.

```
puts node.id
=> "ST39469"
```

```
puts link.id
=> "ST41337.ST34322.1"
```

id= (Set)

```
#id=(new_id) => void
```

EXCHANGE, UI

Sets the ID of the object. Will raise an exception if the ID cannot be set e.g. is a duplicate.

Parameters

Name	Type(s)	Description
new_id	String	The new id, which must be unique and formatted the same way as an id retrieved from the <code>#id</code> method.

is_inside?

```
#is_inside?(other) => Boolean
```

EXCHANGE, UI

Checks if this object is inside a polygon.

Parameters

Name	Type(s)	Description
other	WSRowObject	The other object, which should be a polygon.
Return	Boolean	If this object is inside the other wsrowobject.

navigate

```
#navigate(type) => Array<WSRowObject>
```

EXCHANGE, UI

Navigates between objects and other objects based on their relationship. Supports one-to-one and one-to-many relationships, and returns an array of objects.

See also: [#navigate1](#)



Name	Has Results	One to Many
alt_demand	No	No
cctv_surveys	No	Yes
custom	No	No
data_logger	No	No
drain_tests	No	Yes
ds_flow_links	Yes	Yes
ds_links	Yes	Yes
ds_node	Yes	No
dye_tests	No	Yes
gps_surveys	No	Yes
hydrant_tests	No	Yes
incidents	No	Yes
joined	No	No
joined_pipes	No	Yes
lateral_pipe	No	No
maintenance_records	No	Yes
manhole_repairs	No	Yes
manhole_surveys	No	Yes
meter_tests	No	Yes
meters	No	Yes
monitoring_surveys	No	Yes
node	Yes	No
pipe	Yes	No
pipe_cleans	No	Yes
pipe_repairs	No	Yes



Name	Has Results	One to Many
pipe_samples	No	Yes
properties	No	Yes
property	No	No
sanitary_manhole	No	No
sanitary_pipe	No	No
smoke_defects	No	Yes
smoke_test	No	No
smoke_tests	No	Yes
storm_manhole	No	No
storm_pipe	No	No
us_flow_links	Yes	Yes
us_links	Yes	Yes
us_node	Yes	No



Parameters

Name	Type(s)	Description
type	String	The navigation type, see method description.

navigate1

```
#navigate1(type) ⇒ WSRowObject?
```

EXCHANGE, UI

Navigates between objects and other objects based on their relationship. Supports one-to-one relationships, and returns a single object if found.

See also: [#navigate](#)

Parameters

Name	Type(s)	Description
type	String	The navigation type, see method description.

objects_in_polygon



```
#objects_in_polygon(type) ⇒ Array<WSRowObject>
```

EXCHANGE, UI

If this object is a polygon, returns an array of the `WSRowObject` objects inside it, matching the `type` parameter.

When using an array of strings as the `type`, all values must be unique (no duplicates) and cannot contain a category and a table within the same category. This is similar to the `WSNumbatNetworkObject.search_at_point` method.

Parameters

Name	Type(s)	Description
type	String, Array<String>, nil	The name(s) of a type or category of object, nil will search all tables.

result

```
#result(field) ⇒ Float
```

EXCHANGE, UI

Returns the value for the given results field, at the current time-step.

Parameters

Name	Type(s)	Description
field	String	
Return	Float	

results

```
#results(field) ⇒ Array<Float>
```

EXCHANGE, UI

Returns an array of values for the given results field name, at all timesteps. The field must have time varying results.

Parameters

Name	Type(s)	Description
field	String	
Return	Array<Float>	



selected= (Set)

```
#selected=(bool) ⇒ void
```

EXCHANGE, UI

Sets whether this object is selected or deselected. This does not need to occur within a transaction.

Parameters

Name	Type(s)	Description
bool	Boolean	If the object is selected, this could be an explicit <code>true</code> or <code>false</code> , or a statement that evaluates to <code>true</code> or <code>false</code> .

selected?

```
#selected? ⇒ Boolean
```

EXCHANGE, UI

Returns if the object is currently selected.

table

```
#table ⇒ String
```

EXCHANGE, UI

Returns the object's table name.

table_info

```
#table_info ⇒ WSTableInfo
```

EXCHANGE, UI

Returns a [WSTableInfo](#) (?guid=Innovyze_Exchange_Classes_ICM_wstableinfo_html) for this object's table, which contains metadata about the table structure.

write



```
#write ⇒ void
```

EXCHANGE, UI

Writes any changes to the object, such as modified field values.

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