

# system.tag.browseConfiguration

This feature is new in Ignition version **7.9.2**  
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This function is used in **Python Scripting**.

## Description

Browses a folder path or UDT and returns Tag configuration information for each Tag within the specified path. This can be used to view event scripts, alarms, as well as any other configurable attribute on a Tag.

## Client Permission Restrictions

This scripting function has no [Client Permission](#) restrictions.

## Syntax

### **system.tag.browseConfiguration(path, recursive)**

- Parameters

**String** path - The path that will be browsed, typically to a folder or UDT instance. Leave blank to browse the root folder. A Tag Provider may be specified as follows: "[TagProvider]". If the Tag Provider is omitted, client scoped calls will be made against the project's default provider. Gateway scoped calls must include a Tag Provider. When browsing UDTs, specifying the UDT path will browse the Tags inside the UDT. To browse the UDT instance, specify the parent of the instance.

**Boolean** recursive - If true, will recursively search for Tags in folders. Each folder will return a 'tags' property containing the nested TagConfigurations in another list.

- Returns

**TagConfiguration[]** - A list of TagConfiguration objects. Attributes on the object may be read by calling tag.get(propertyObject). A list of attributes with configuration information can be obtained by calling getProperties(). Only attributes with non-default values will appear in the attribute list.

- Scope

All



If called in the gateway scope, a tag provider must be specified.

## TagConfiguration Method Summary

Method	Description
getAlarms()	Returns a list of AlarmDefinition objects. Calling getProperties() on the object will return a list of non-default alarm properties.
getFolderPath()	Returns the path to the folder the Tag resides in.
getFullPath()	Returns the Tag path.
getName()	Returns the name of the Tag.
getParameterSet()	Returns a BasicPropertySet of UDT parameters. Returns an empty list if called on a Folder. Parameters and their values may be accessed with '.property' and '.value'
getProperties()	Returns a Java Hashmap of properties that have non-default values. Individual values may be specified by calling tag.get(propertyObject).
getSubTags()	If called on a folder and the recursive parameter is True, returns a list of TagConfiguration objects pertaining to the nested nodes. Returns an empty list if called on a UDT instance or recursive is False.
getTagType()	Returns the type of the node. Possible values are: <ul style="list-style-type: none"><li>• OPC</li><li>• UDT_INST</li><li>• Folder</li><li>• DB</li></ul> <p>The DB type is unique in that it is a parent type to several other types. If the TagConfiguration has a property named expressionType, then it can be examined to determine its type. If it does not contain an expressionType property, then it is a Memory tag. The other types are listed below:</p> <ul style="list-style-type: none"><li>• SQL_Query</li><li>• Expression</li><li>• DERIVED</li></ul>

## Code Examples

### Code Snippet - Print Attributes From All Tags

```
"""
This example will browse the root of the Tag Provider named "default".
For each tag found, prints the non-default properties.
"""

# Specify the folder to browse. Modify this line to filter on a specific folder.
folderPath = "[default]"

# Start a non-recursive browse, and stores the configuration data in a variable
tagConfig = system.tag.browseConfiguration(folderPath, False)

# Iterate through the configuration data
for tag in tagConfig:

    # For each tag, retrieve a list of non-default properties. We check each iteration of
    tagConfig
    # because each tag can potentially have a different configuration
    propList = tag.getProperties()

    # Iterate through the list of properties
    for prop in propList:

        # Print the property name and value.
        print "Property '%s' has a value of '%s'" % (prop, tag.get(prop))
```

### Code Snippet - Show Tag Types

```
# Start a non-recursive browse, and stores the configuration data in a variable
tagConfig = system.tag.browseConfiguration('[default]', False)

# Iterate through the configuration data
for tag in tagConfig:

    # Get the type of tag.
    tagType = tag.getTagType()

    # The DB tag type has multiple subtypes. To determine its real type, we need to
    examine it further
    if str(tagType) == 'DB':

        # Look at the properties of the DB tag, and iterate over them
        propList = tag.getProperties()
        for prop in propList:

            # Once we find the expressionType, we can examine this property to
            determine the actual tag type
            if str(prop) == 'expressionType':
                tagType = tag.get(prop)
                # If we found the type, then we don't need to check the rest
                of the properties
                break

            # If we didn't break out, then we didn't find expressionType. Thus, it's a
            memory tag
            else:
                tagType = 'Memory'

    print '%s has a tag type of %s' % (tag.getName(), tagType)
```

### Code Snippet - Retrieve UDT parameters

```
# This example will examine a UDT instance, and retrieve the values of parameters
# on that instance
path = '[myTagProvider]myUDTInstance'

# Non-recursive browse on the configuration of the UDT instance.
config = system.tag.browseConfiguration(path, False)

# Since this example is looking up a single tag's parameters, we're using python
# indexing to specify the first configuration.
# We could replace this with a for-loop if we needed to browse multiple configurations
params = config[0].getParameters()

# Iterate over the parameters
for thing in params:

    paramName = thing.getProperty().getName()
    paramValue = thing.getValue()

    # print the name of the UDT parameter, and it's value
    print paramName, paramValue
```