

# Quality and Sizing Model Resources - 1.12.x

## On this page:

- [Glossary](#)
- [Configuration Snapshot](#)
- [Configuration Models](#)
- [Collection of Configuration Items](#)
- [Business Criterion](#)
- [Technical Criterion](#)
- [Indirect Grade Contributors](#)
- [Quality Rule](#)
- [Quality Distribution](#)
- [Quality Measure](#)
- [Sizing Measure](#)
- [Background Fact](#)
- [Rule Pattern](#)
- [Distribution Pattern](#)
- [Measure Pattern](#)

## Glossary

Term	Definition
Background Fact	An external information that can be related to Quality Indicators or Sizing Measures
Business Criterion	A Quality Criterion which grade is based upon contributing technical criteria grades and critical violations
Category	A Quality Distribution slot. There are 4 categories defined for each Quality Distribution. A category measure is an input value to compute the Quality Distribution grade.
Configuration Item	A Quality Indicator, Sizing Measure of Background Fact, implemented as calculation rule to measure an application or a module.
Distribution Pattern	The Distribution Pattern is the definition of the Object property to use to decide in which distribution category to assign Objects. It also includes the associated documentation: description, rationale, reference, remediation, ...
Grade Aggregator	An impacted Quality Indicator (see Grade Contributor)
Grade Contributor	A Quality Indicator which measure is used to compute another Quality Indicator (see Grade Aggregator)
Indirect Contributing Quality Indicator	A Quality Rule, Quality Distribution or Quality Measure contributing to a Business Criterion
Measure Pattern	The Measure Pattern is the definition of the measure to perform on each Module. It also includes the associated documentation: description, rationale, reference, remediation, ...
Quality Indicator	An calculation measure which unit is a grade between 1.0 (very high risk) and 4.0 (low risk) to assess a source code quality.
Quality Distribution	A Quality Criterion based on a distribution pattern
Quality Rule	A Quality Criterion to assess compliance of a source code with a Rule Pattern.
Quality Measure	A Quality Criterion based on a measure pattern
Rule Pattern	The Rule Pattern is the pattern that is searched for in the analysis results (source code, cartography, etc.) to pinpoint Violations. It also includes the associated documentation: description, rationale, reference, remediation, ...
Sizing Measure	A quantitative measure
Technical Criterion	A Quality Indicator which grade is based upon contributing Quality Rule , Quality Distribution and Quality Measures grades.

## Configuration Snapshot

## URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/configuration/snapshots	Array of Configurations snapshots
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}	A configuration snapshot content

## JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
name	Configuration name	String	1
number	Snapshot order number.Snapshots are ordered according to the annotation.date	Integer	1
annotation	User annotations describing this snapshot	Structure	1
annotation.version	Assessment point number	String	1
annotation.date	Application date	Date	1
annotation.description	Snapshot description	String	1
annotation.name	Snapshot name	String	1
annotation.enhancementMeasure	Computation mode of enhancement data. It has one of the following values : "EFP" or "AEP"	String	1
qualityIndicators.href	Reference to get a group of indicators	URI	1
sizingMeasures.href	Reference to get a group of sizing measures	URI	1
backgroundFacts.href	Reference to get background facts	URI	1

## JSON Example

### GET DEMO/configuration/snapshots/5

```
{
  "href": "DEMO/configuration/snapshots/5",
  "name": "Configuration Snapshot #1",
  "number": 1,
  "annotation": {
    "version": "1.0",
    "date": {
      "time": 1338328800000
    },
    "description": null,
    "name": "GM_DRAS_201206180516",
    "enhancementMeasure": "EFP"
  },
  "qualityIndicators": {
    "href": "DEMO/configuration/snapshots/5/quality-indicators",
    "name": "All Quality Indicators"
  },
  "sizingMeasures": {
    "href": "DEMO/configuration/snapshots/5/sizing-measures",
    "name": "All Sizing Measures"
  },
  "backgroundFacts": {
    "href": "DEMO/configuration/snapshots/5/background-facts",
    "name": "All Background Facts"
  }
}
```

---

## Configuration Models

### URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}/quality-indicators	Quality Model
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}/sizing-measures	Sizing Model

### JSON Representation

Quality Model			
Properties	Description	Type	Occurs
businessCriteria.href	All Business criteria	URI	1
technicalCriteria.href	All Technical criteria.	URI	1
qualityRules.href	All Quality Rules	URI	1
qualityDistributions.href	All Quality Distributions	URI	1
qualityMeasures.href	All Quality Measures	URI	1

Sizing Model			
Properties	Description	Type	Occurs
technicalSizeMeasures.href	All Technical Size Measures	URI	1
functionalWeightMeasures.href	All Functional Weight Measures	URI	1
criticalViolationStatistics.href	All Critical Violation Statistics	URI	1
violationStatistics.href	All Violation Statistics	URI	1
technicalDebtStatistics.href	All Technical Debt Statistics	URI	1
runtimeStatistics.href	All Run-time Statistics	URI	1

### JSON Example

## GET DEMO/configuration/snapshots/5/quality-indicators

```
{
  "businessCriteria": {
    "href": "DEMO/configuration/snapshots/5/business-criteria",
    "name": "All Business Criteria"
  },
  "technicalCriteria": {
    "href": "DEMO/configuration/snapshots/5/technical-criteria",
    "name": "All Technical Criteria"
  },
  "qualityRules": {
    "href": "DEMO/configuration/snapshots/5/quality-rules",
    "name": "All Quality Rules"
  },
  "qualityDistributions": {
    "href": "DEMO/configuration/snapshots/5/quality-distributions",
    "name": "All Quality Distributions"
  },
  "qualityMeasures": {
    "href": "DEMO/configuration/snapshots/5/quality-measures",
    "name": "All Quality Measures"
  }
}
```

## Collection of Configuration Items

### URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}/business-criteria	Array of references to Quality Indicators definitions
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}/technical-criteria	Array of references to Quality Indicators definitions
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}/quality-rules	Array of references to Quality Indicators definitions
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}/quality-distributions	Array of references to Quality Indicators definitions
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}/quality-measures	Array of references to Quality Indicators definitions
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}/technical-size-measures	Array of references to Sizing Measures definitions
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}/functional-weight-measures	Array of references to Sizing Measures definitions
GET	application/json	{Domain}/configuration/snapshots/{snapshotID}/critical-violation-statistics	Array of references to Sizing Measures definitions

GET	application /json	{Domain}/configuration/snapshots/{snapshotID}/violation-statistics	Array of references to Sizing Measures definitions
GET	application /json	{Domain}/configuration/snapshots/{snapshotID}/technical-debt-statistics	Array of references to Sizing Measures definitions
GET	application /json	{Domain}/configuration/snapshots/{snapshotID}/runtime-statistics	Array of references to Sizing Measures definitions
GET	application /json	{Domain}/configuration/snapshots/{snapshotID}/background-facts	Array of references to Background Facts definitions

## Business Criterion

### URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/quality-indicators/{metricID}/snapshots/{snapshotID}	A snapshotted Quality Indicator definition

### JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
key	Metric Id	String	1
name	Business Criterion name	String	1
description	Metric description	String	0..1
type	Type	String	1
annotation	User annotation describing this snapshot	Structure	1
annotation.version	Assessment point number	String	1
annotation.date	Application date	Date	1
annotation.description	Snapshot description	String	1
annotation.name	Snapshot name	String	1
annotation.enhancementMeasure	Computation mode of enhancement data. It has one of the following values : "EFP" or "AEP"	String	1
number	Snapshot order number	Integer	1
gradeAggregators	An empty array	Array	1
gradeContributors	An array of contributing Technical Criteria	Array	1
gradeContributors[].href	A contributing technical criteria	URI	1
baseQualityIndicators.href	Reference to get an array of indirect contributing quality indicators	URI	1

### JSON Example

## GET DEMO/quality-indicators/66032/snapshots/5 (Business Criterion)

```
{
  "href": "DEMO/quality-indicators/66032/snapshots/5",
  "key": "66032",
  "name": "Architectural Design",
  "description": "Architectural Design",
  "type": "business-criteria",
  "annotation": {
    "version": "1.0",
    "date": {
      "time": 1338328800000
    },
    "description": null,
    "name": "GM_DRAS_201206180516",
    "enhancementMeasure": "EFP"
  },
  "number": 1,
  "gradeAggregators": [],
  "gradeContributors": [
    {
      "href": "DEMO/quality-indicators/66070/snapshots/5",
      "key": "66070",
      "name": "Architecture - Architecture Models Automated Checks",
      "weight": 1,
      "critical": false
    },
    ...
  ],
  "baseQualityIndicators": {
    "href": "DEMO/quality-indicators/66032/snapshots/5/base-quality-indicators",
    "name": "All indirect grade contributors"
  }
}
```

## Technical Criterion

### URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/quality-indicators/{metricID}/snapshots/{snapshotID}	A snapshotted Quality Indicator definition

### JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
name	Quality indicator name	String	1
shortName	Abbreviation	String	0..1
number	Snapshot order number	Integer	1
type	Type	String	1
gradeAggregators	Indicators depending on this indicator	Array	0..1
gradeAggregators[].href	Grade Aggregator reference	URI	1
gradeAggregators[].name	Grade Aggregator name	String	1
gradeAggregators[].key	Grade Aggregator key	String	1
gradeContributors.href	Reference to get an array of contributing Quality Indicators	URI	1

rationale	Text	String	0..1
description	Tex	String	0..1
snapshots.href	Reference to get history of this item	URI	1
annotation	User annotation describing this snapshot	Structure	1
annotation.version	Assessment point number	String	1
annotation.date	Application date	Date	1
annotation.description	Snapshot description	String	1
annotation.name	Snapshot name	String	1
annotation.enhancementMeasure	Computation mode of enhancement data. It has one of the following values : "EFP" or "AEP"	String	1

## JSON Example

### GET DEMO/quality-indicators/61029/snapshots/5 (Technical Criterion)

```
{
  "href": "DEMO/quality-indicators/61029/snapshots/5",
  "key": "61029",
  "name": "Complexity - Dynamic Instantiation",
  "description": "Respect of practices regarding dynamic instantiation",
  "type": "technical-criteria",
  "annotation": {
    "version": "1.0",
    "date": {
      "time": 1338328800000
    },
    "description": null,
    "name": "GM_DRAS_201206180516",
    "enhancementMeasure": "EFP"
  },
  "number": 1,
  "gradeAggregators": [
    {
      "href": "DEMO/quality-indicators/60012/snapshots/5",
      "key": "60012",
      "name": "Changeability"
    },
    {
      "href": "DEMO/quality-indicators/60014/snapshots/5",
      "key": "60014",
      "name": "Efficiency "
    },
    ...
  ],
  "gradeContributors": [
    {
      "href": "DEMO/quality-indicators/2572/snapshots/5",
      "key": "2572",
      "name": "Avoid declaring VB Variables without typing them"
    },
    ...
  ]
}
```

## Indirect Grade Contributors

### URI Templates

HTTP Action	Media Type	URI Templates	Description
-------------	------------	---------------	-------------

GET	application/json	{Domain}/quality-indicators/{metricID}/snapshots/{snapshotID}/base-quality-indicators	Array of Indirect Contributing Quality Indicators
-----	------------------	---	---

## JSON Representation

Properties	Description	Type	Occurs
href	Quality Indicator reference	URI	1
key	Quality Indicator key	String	1
name	Quality Indicator name	String	1
compoundedWeight	A contributing weight of a quality indicator is the <b>sum</b> of all contributing path weights from the quality indicator to the business criterion. A contributing path weight is the product: contributing weight from the quality indicator to the technical criterion x contributing weight of the technical criterion to the business criterion	Integer	1
compoundedWeightFormula	Explicit formula used to calculate the compounded weight Ex: "(8x4)+(4x5)"	String	1
critical	Boolean if the quality indicator is critical for at least one technical criterion	Boolean	1

## JSON Example

GET DEMO/quality-indicators/66032/snapshots/5/base-quality-indicators
<pre>[   {     "href": "DEMO/quality-indicators/7140/snapshots/5",     "key": "7140",     "name": "Action artifacts should not directly call a JSP page",     "compoundedWeight": 3,     "compoundedWeightFormula": "(1x3)",     "critical": true   },   {     "href": "DEMO/quality-indicators/7144/snapshots/5",     "key": "7144",     "name": "Action Artifacts should not directly use database objects",     "compoundedWeight": 7,     "compoundedWeightFormula": "(1x7)",     "critical": true   },   ... ]</pre>

## Quality Rule

### URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/quality-indicators/{metricID}/snapshots/{snapshotID}	A snapshoted Quality Indicator definition

## JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
name	Quality rule name	String	1



shortName	Abbreviation	String	0..1
number	Snapshot order number	Integer	1
type	Type	String	1
rulePattern	Pattern	URI	1
gradeAggregators	Indicators depending on this indicator	Array	0..1
gradeAggregators[].href	Grade Aggregator reference	URI	1
gradeAggregators[].name	Grade Aggregator name	String	1
gradeAggregators[].key	Grade Aggregator key	String	1
gradeSettings.thresholds	Thresholds used in grade formula to transform a quality rule compliance ratio into a grade.	Array	1
gradeSettings.thresholds[]	A percentage threshold	Integer	4
snapshots.href	Reference to get history of this item	URI	1
annotation	User annotation describing this snapshot	Structure	1
annotation.version	Assessment point number	String	1
annotation.date	Application date	Date	1
annotation.description	Snapshot description	String	1
annotation.name	Snapshot name	String	1
annotation.enhancementMeasure	Computation mode of enhancement data. It has one of the following values : "EFP" or "AEP"	String	1

## JSON Example

### GET DEMO/quality-indicators/7298/snapshots/5 (Quality Rule)

```
{
  "href": "DEMO/quality-indicators/7298/snapshots/5",
  "key": "7298",
  "name": "A class that has pointer data members must provide a copy constructor",
  "description": "The report list...",
  "type": "quality-rules",
  "annotation": {
    "version": "1.0",
    "date": {
      "time": 1338328800000
    },
    "description": null,
    "name": "GM_DRAS_201206180516",
    "enhancementMeasure": "EFP"
  },
  "number": 1,
  "gradeAggregators": [
    {
      "href": "DEMO/quality-indicators/66069/snapshots/5",
      "key": "66069",
      "name": "Programming Practices - Unexpected Behavior"
    }
  ],
  "gradeContributors": [],
  "thresholds": [
    98,
    99,
    99.5,
    99.99
  ],
  "rulePattern": {
    "href": "DEMO/rule-patterns/7298",
    "name": "A class that has pointer data members must provide a copy constructor"
  }
}
```

# Quality Distribution

## URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/quality-indicators/{metricID}/snapshots/{snapshotID}	A snapshotted Quality Indicator definition

## JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
name	Quality rule name	String	1
shortName	Abbreviation	String	0..1
number	Snapshot order number	Integer	1
type	Type	String	1
distributionPattern	Pattern	URI	1
gradeAggregators	Indicators depending on this indicator	Array	0..1
gradeAggregators[].href	Grade Aggregator reference	URI	1
gradeAggregators[].name	Grade Aggregator name	String	1
gradeAggregators[].key	Grade Aggregator key	String	1
gradeSettings.categories	4 ordered categories	Array	1
gradeSettings.categories[ ]	A category (a distribution slot)	Structure	0..*
gradeSettings.categories[ ].name	Category name	String	1
gradeSettings.categories[ ].thresholds	4 thresholds	Array	1
gradeSettings.categories[ ].thresholds[ ]	A thresholds used in grade formula to transform a category measure into a category grade	Double	0..4
snapshots.href	Reference to get history of this item	URI	1
annotation	User annotation describing this snapshot	Structure	1
annotation.version	Assessment point number	String	1
annotation.date	Application date	Date	1
annotation.description	Snapshot description	String	1
annotation.name	Snapshot name	String	1
annotation.enhancementMeasure	Computation mode of enhancement data. It has one of the following values : "EFP" or "AEP"	String	1
parameters[ ]		Array	1
parameters[ ].name	Parameter name; a threshold to distribute objects into catagerories	String	1
parameters[ ].technology	Applicable technology	String	1
parameters[ ].value	The threshold value	Number	1

## JSON Example

## GET DEMO/quality-indicators/65601/snapshots/5 (Quality Distribution)

```
{
  "href": "DEMO/quality-indicators/65601/snapshots/5",
  "key": "65601",
  "name": "4GL Complexity Distribution",
  "description": "Distribution of Forms regarding their complexity",
  "type": "quality-distributions",
  "annotation": {
    "version": "1.0",
    "date": {
      "time": 1338328800000
    },
    "description": null,
    "name": "GM_DRAS_201206180516",
    "enhancementMeasure": "EFP"
  },
  "number": 1,
  "gradeAggregators": [
    {
      "href": "DEMO/quality-indicators/61009/snapshots/5",
      "key": "61009",
      "name": "Complexity - Algorithmic and Control Structure Complexity"
    },
    {
      "href": "DEMO/quality-indicators/61026/snapshots/5",
      "key": "61026",
      "name": "Complexity - Technical Complexity"
    }
  ],
  "gradeContributors": [],
  "categories": [
    {
      "name": "Very High 4GL Complexity Forms",
      "thresholds": [
        5,
        4,
        2,
        0
      ]
    },
    ...
  ],
  "distributionPattern": {
    "href": "DEMO/distribution-patterns/65601",
    "name": "4GL Complexity Distribution"
  },
  "parameters": [
    {
      "name": "Heavy Forms threshold",
      "technology": ".Net",
      "value": 20
    },
    {
      "name": "Heavy Forms threshold",
      "technology": "C#",
      "value": 20
    },
    ...
  ]
}
```

## Quality Measure

## URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/quality-indicators/{metricID}/snapshots/{snapshotID}	A snapshotted Quality Indicator definition

## JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
name	Quality rule name	String	1
shortName	Abbreviation	String	0..1
number	Snapshot order number	Integer	1
type	Type	String	1
measurePattern	Pattern	URI	1
gradeAggregators	Indicators depending on this indicator	Array	0..1
gradeAggregators[].href	Grade Aggregator reference	URI	1
gradeAggregators[].name	Grade Aggregator name	String	1
gradeAggregators[].key	Grade Aggregator key	String	1
snapshots.href	Reference to get history of this item	URI	1
annotation	User annotation describing this snapshot	Structure	1
annotation.version	Assessment point number	String	1
annotation.date	Application date	Date	1
annotation.description	Snapshot description	String	1
annotation.name	Snapshot name	String	1
annotation.enhancementMeasure	Computation mode of enhancement data. It has one of the following values : "EFP" or "AEP"	String	1

## JSON Example

## DEMO/quality-indicators/66067/snapshots/5 (Quality Measure)

```
{
  "href": "DEMO/quality-indicators/66067/snapshots/5",
  "key": "66067",
  "name": "Avoid High Volume of Copy Pasted Code",
  "description": "This metric is based...",
  "type": "quality-measures",
  "annotation": {
    "version": "1.0",
    "date": {
      "time": 1338328800000
    },
    "description": null,
    "name": "GM_DRAS_201206180516",
    "enhancementMeasure": "EFP"
  },
  "number": 1,
  "gradeAggregators": [
    {
      "href": "DEMO/quality-indicators/66009/snapshots/5",
      "key": "66009",
      "name": "Architecture - Reuse"
    }
  ],
  "gradeContributors": [],
  "measurePattern": {
    "href": "DEMO/measure-patterns/66067",
    "name": "Avoid High Volume of Copy Pasted Code"
  }
}
```

## Sizing Measure

### URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/sizing-measures/{metricID}/snapshots/{snapshotID}	A snapshotted Sizing Measure definition

### JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
name	Quality rule name	String	1
description	Text	String	1
type	Type	String	1
annotation	User annotation describing this snapshot	Structure	1
annotation.date	Snapshot date	Date	1
annotation.version	Assessment version number	String	1
annotation.description	Snapshot description	String	1
annotation.name	Snapshot name	String	1
annotation.enhancementMeasure	Computation mode of enhancement data. It has one of the following values : "EFP" or "AEP"	String	1

number	Snapshot order number	Integer	1
--------	-----------------------	---------	---

## JSON Example

### GET DEMO/sizing-measures/68001/snapshots/5

```
{
  "href": "DEMO/sizing-measures/68001/snapshots/5",
  "key": "68001",
  "name": "Technical Debt",
  "description": "Technical Debt estimates...",
  "type": "technical-debt-statistics",
  "annotation": {
    "version": "1.0",
    "date": {
      "time": 1338328800000
    },
    "description": null,
    "name": "GM_DRAS_201206180516",
    "enhancementMeasure": "EFP"
  },
  "number": 1,
}
```

## Background Fact

### URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/background-facts/{metricID}/snapshots/{snapshotID}	A snapshotted Background Fact definition

### JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
name	Quality rule name	String	1
shortName	Abbreviation	String	0..1
number	Snapshot order number	Integer	1
type	Always "background-facts"	String	1
description	Text	String	0..1
snapshots.href	Reference to get history of this item	URI	1
annotation	User annotation describing this snapshot	Structure	1
annotation.version	Assessment point version number	String	1
annotation.date	Application date	Date	1
annotation.description	Snapshot description	String	1
annotation.name	Snapshot name	String	1
annotation.enhancementMeasure	Computation mode of enhancement data. It has one of the following values : "EFP" or "AEP"	String	1

### JSON Example

## GET DEMO/background-facts/66061/snapshots/5

```
{
  "href": "DEMO/background-facts/66061/snapshots/5",
  "key": "66061",
  "name": "Business Value",
  "description": "description",
  "type": "background-facts",
  "annotation": {
    "version": "1.0",
    "date": {
      "time": 1338328800000
    },
    "description": null,
    "name": "GM_DRAS_201206180516",
    "enhancementMeasure": "EFP"
  },
  "number": 1,
}
```

## Rule Pattern

### URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/rule-patterns/{metricID}	A Rule Pattern definition

### JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
name	Pattern name	String	1
key	Pattern public identifier	String	1
rationale	Text	String	1
description	Text	String	1
remediation	Text	String	1
reference	Text: External reference	String	0..1
sample	Text: Code snippet of a bad practice	String	0..1
remediationSample	Text: Code snippet of a remediation	String	0..1
output	Diagnosis findings report	String	0..1
associatedValueName	Diagnosis findings name	String	0..1
total	Text: definition of the tested components	String	0..1
technologies	Applicable technologies	Array	1
technologies[ ]	An applicable technology	String	1..*
qualityStandards	Quality Standard References	Array	1
qualityStandards[ ]	A Quality Standard Reference	Struct	0..1
qualityStandards[ ].standard	Quality Standard name	String	1
qualityStandards[ ].id	Quality Standard reference ID	String	1
qualityStandards[ ].reference	URL to get an external documentation	String	1

qualityStandards[ ].description	RESERVED	String	1
---------------------------------	----------	--------	---

## JSON Example

### GET DEMO/rule-patterns/7298

```
{
  "href": "DEMO/rule-patterns/7298",
  "key": "7298",
  "name": "A class that has pointer data members must provide a copy constructor",
  "description": "The report list all...",
  "technologies": [
    "C++"
  ],
  "rationale": "If you don't define a copy constructor...",
  "reference": null,
  "remediation": "Define a copy constructor to properly manage pointer data members.",
  "output": null,
  "associatedValueName": null,
  "total": null,
  "sample": "class MyClass {\n  char * apointermember;\n};",
  "remediationSample": "class MyClass...",
  "qualityStandards": [
    {
      "standard": "CISQ"
      "id": "ASCMM-MNT-15"
      "name": "Public Member Element"
      "reference": null
      "description": null
    }
  ]
}
```

## Distribution Pattern

### URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/distribution-patterns/{metricID}	A Distribution Pattern definition

### JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
name	Pattern name	String	1
key	Pattern public identifier	String	1
rationale	Text	String	1
description	Text	String	1
remediation	Text	String	1
reference	Text: External reference	String	0..1
output	Diagnosis findings report	String	0..1
associatedValueName	Diagnosis findings name	String	0..1
technologies	Applicable technologies	Array	1



technologies[ ]	An applicable technology	String	1..*
-----------------	--------------------------	--------	------

## JSON Example

### GET DEMO/distribution-patterns/65601

```
{
  "href": "DEMO/distribution-patterns/65601",
  "key": "65601",
  "name": "4GL Complexity Distribution",
  "description": "Distribution of Forms regarding their complexity",
  "technologies": [],
  "rationale": null,
  "reference": null,
  "remediation": null,
  "output": null,
  "associatedValueName": null
}
```

## Measure Pattern

### URI Templates

HTTP Action	Media Type	URI Templates	Description
GET	application/json	{Domain}/measure-patterns/{metricID}	A Measure Pattern definition

### JSON Representation

Properties	Description	Type	Occurs
href	Auto reference	URI	1
name	Pattern name	String	1
key	Pattern public identifier	String	1
rationale	Text	String	1
description	Text	String	1
remediation	Text	String	1
reference	Text: External reference	String	0..1
output	deprecated	String	0..1
associatedValueName	Diagnosis findings name	String	0..1
total	Text: definition of the tested components	String	0..1
technologies	Applicable technologies	Array	1
technologies[ ]	An applicable technology	String	1..*

### JSON Example

## GET DEMO/measure-patterns/66067

```
{
  "href": "DEMO/measure-patterns/66067",
  "key": "66067",
  "name": "Avoid High Volume of Copy Pasted Code",
  "description": "This metric is based on the ratio...",
  "technologies": [],
  "rationale": "A program with a lot of duplication...",
  "reference": null,
  "remediation": null,
  "output": null,
  "associatedValueName": null,
  "total": "Artifacts larger than 10 lines of code ( default value of the CODELINE parameter ) "
}
```