

# Schema documentation for service-definition-1.3.xsd

20 october 2013

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## Namespace: ""


### Schemas

#### Main schema service-definition-1.3.xsd

|           |              |
|-----------|--------------|
| Namespace | No namespace |
|-----------|--------------|

### Elements

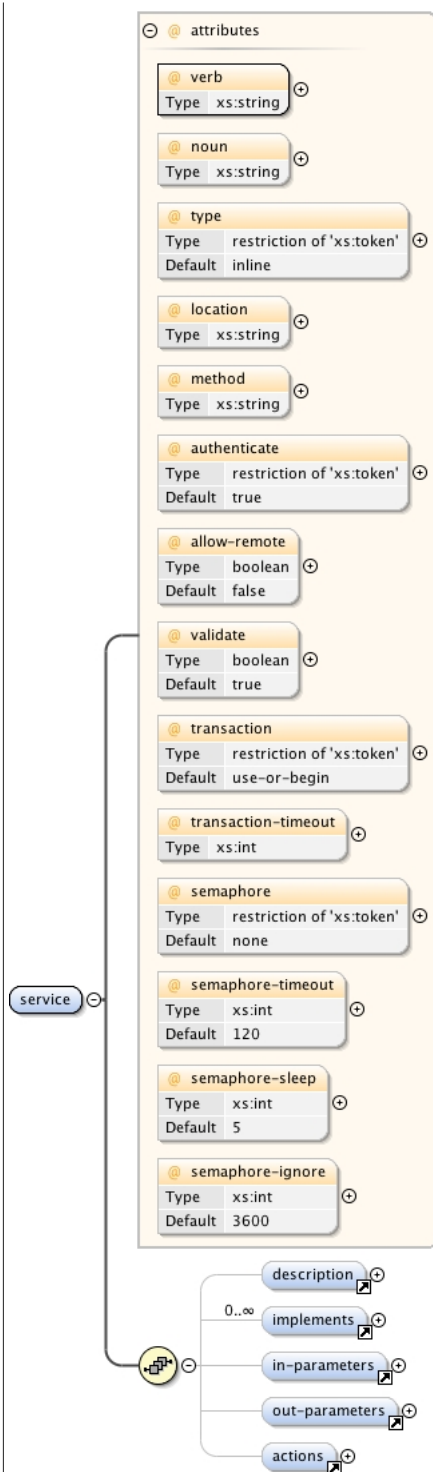
#### Element services

|           |  |
|-----------|--|
| Namespace | No namespace   |
| Diagram   |   |
| Instance  | <pre> &lt;services&gt;   &lt;service allow- remote="false" authenticate="true" location="" method="" noun="" semaphore="none" semaphore- ignore="3600" semaphore-sleep="5" semaphore-timeout="120" transaction="use-or- begin" transaction-timeout="" type="inline" validate="true" verb=""&gt;{0,unbounded}&lt;/ service&gt; &lt;/services&gt; </pre> |

#### Element service

|           |              |
|-----------|--------------|
| Namespace | No namespace |
|-----------|--------------|

Diagram

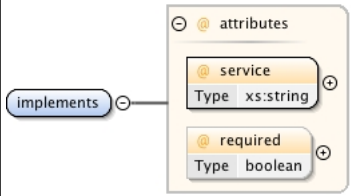


|            |   |         |       |         |          |
|------------|---|---------|-------|---------|----------|
| Used by    | Element services  |         |       |         |          |
| Instance   | <pre>&lt;service allow-remote="false" authenticate="true" location="" method="" noun="" semaphore="none" semaphore-ignore="3600" semaphore-sleep="5" semaphore-timeout="120" transaction="use-or-begin" transaction-timeout="" type="inline" validate="true" verb=""&gt;   &lt;description&gt;{0,1}&lt;/description&gt;   &lt;implements required="" service=""&gt;{0,unbounded}&lt;/implements&gt;   &lt;in-parameters&gt;{0,1}&lt;/in-parameters&gt;   &lt;out-parameters&gt;{0,1}&lt;/out-parameters&gt;   &lt;actions&gt;{0,1}&lt;/actions&gt; &lt;/service&gt;</pre> |         |       |         |          |
| Attributes | QName   | Type    | Fixed | Default | Use      |
|            | allow-remote  | boolean |       | false   | optional |

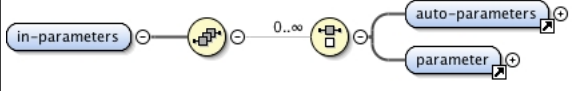
| QName                      | Type  | Fixed | Default      | Use      |
|----------------------------|---|-------|--------------|----------|
| <b>authenticate</b>        | restriction of xs:token   |       | true         | optional |
|                            | <p>If not set to false (is true by default) a user must be logged in to run this service. If the service is running in an ExecutionContext with a user logged in that will qualify. If not then either a "authUserAccount" parameter or the "authUsername" AND "authPassword" parameters must be specified and must contain valid values for a user of the system.</p> <p>If the "authUserAccount" parameter or the "authUsername" AND "authPassword" parameters are passed in they will be used for the service call even if a user is logged in to the ExecutionContext that the service is running in.</p> <p>An "authTenantId" parameter may also be specified to authenticate the user in a specific tenant instance. If specified will be used to run the service with that as the context tenant.</p> <p>If set to anonymous-all or anonymous-view not only with authentication not be required, but this service will run as if authorized (using the _NA_ UserAccount) for all actions or for view-only.</p> |       |              |          |
| <b>location</b>            | xs:string   |       |              | optional |
| <b>method</b>              | xs:string   |       |              | optional |
| <b>noun</b>                | xs:string   |       |              | optional |
|                            | For entity-auto services this should be a valid entity name. In many other cases an entity name is the best way to describe what is being acted on, but this can really be anything.  |       |              |          |
| <b>semaphore</b>           | restriction of xs:token   |       | none         | optional |
|                            | Intended for use in long-running services (usually scheduled). This uses a record in the database to "lock" the service so that only one instance of it can run against a given database at any given time.   |       |              |          |
| <b>semaphore-ignore</b>    | xs:int  |       | 3600         | optional |
|                            | Ignore existing semaphores after this time, in seconds.   |       |              |          |
| <b>semaphore-sleep</b>     | xs:int  |       | 5            | optional |
|                            | When waiting how long to sleep between checking the semaphore, in seconds.  |       |              |          |
| <b>semaphore-timeout</b>   | xs:int  |       | 120          | optional |
|                            | When waiting how long before timing out, in seconds.  |       |              |          |
| <b>transaction</b>         | restriction of xs:token   |       | use-or-begin | optional |
| <b>transaction-timeout</b> | xs:int  |       |              | optional |
|                            | Defines the timeout for the transaction, in seconds. This value is only used if this service begins a transaction (either require-new, or use-or-begin and there is no other transaction already in place).   |       |              |          |
| <b>type</b>                | restriction of xs:token   |       | inline       | optional |
| <b>validate</b>            | boolean   |       | true         | optional |
| <b>verb</b>                | xs:string   |       |              | required |
|                            | This can be any verb, and will often be one of: create, update, delete, or find. The full name of the service will be: "\${verb}\${noun}". The verb is required and the noun is optional so if there is no noun the service name will be just the verb.   |       |              |          |

## Element implements

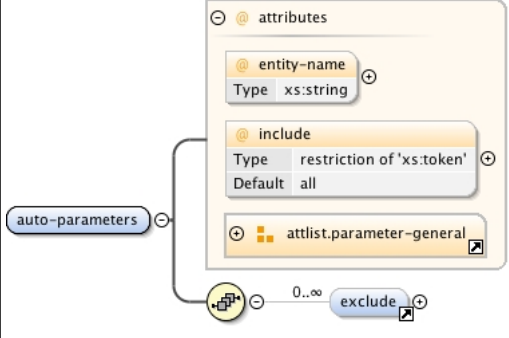
|           |              |
|-----------|--------------|
| Namespace | No namespace |
|-----------|--------------|

|            |  |             |              |                |            |
|------------|--|-------------|--------------|----------------|------------|
| Diagram    |             |             |              |                |            |
| Used by    | Element service  |             |              |                |            |
| Attributes | <b>QName</b>   | <b>Type</b> | <b>Fixed</b> | <b>Default</b> | <b>Use</b> |
|            | <b>required</b>  | boolean     |              |                | optional   |
|            | If set to true or false all parameters inherited have that value for the required attribute. |             |              |                |            |
|            | <b>service</b>   | xs:string   |              |                | required   |

## Element in-parameters

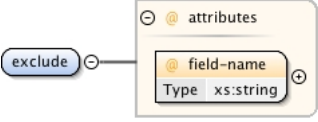
|           |   |  |  |  |  |
|-----------|---|--|--|--|--|
| Namespace | No namespace  |  |  |  |  |
| Diagram   |    |  |  |  |  |
| Used by   | Element service   |  |  |  |  |
| Instance  | <pre>&lt;in-parameters&gt;   &lt;auto-parameters allow-html="none" entity-name="" include="all" required="false"&gt;{1,1}&lt;/auto-parameters&gt;   &lt;parameter allow-html="none" default-value="" format="" name="" required="false" type="String"&gt;{1,1}&lt;/parameter&gt; &lt;/in-parameters&gt;</pre> |  |  |  |  |

## Element auto-parameters

|            |   |                         |              |                |            |
|------------|---|-------------------------|--------------|----------------|------------|
| Namespace  | No namespace  |                         |              |                |            |
| Diagram    |    |                         |              |                |            |
| Used by    | Elements in-parameters, out-parameters  |                         |              |                |            |
| Instance   | <pre>&lt;auto-parameters allow-html="none" entity-name="" include="all" required="false"&gt;   &lt;exclude field-name=""&gt;{0,unbounded}&lt;/exclude&gt; &lt;/auto-parameters&gt;</pre>                          |                         |              |                |            |
| Attributes | <b>QName</b>  | <b>Type</b>             | <b>Fixed</b> | <b>Default</b> | <b>Use</b> |
|            | <b>allow-html</b>   | restriction of xs:token |              | none           | optional   |
|            | Applies only to String fields. Only checked for incoming parameters (meant for validating input from users, other systems, etc). Defaults to "none" meaning no HTML is allowed (will result in an error message). |                         |              |                |            |
|            | If some HTML is desired then use "safe" which will follow the rules in the antisamy-esapi.xml file. This should be safe for both internal and public users.   |                         |              |                |            |
| Attributes | In rare cases when users are trusted or it is not a sensitive field the "any" option may be used to not check the HTML content at all.  |                         |              |                |            |
|            |   |                         |              |                |            |

|  | QName              | Type                    | Fixed | Default | Use      |
|--|--------------------|-------------------------|-------|---------|----------|
|  | <b>entity-name</b> | xs:string               |       |         | optional |
|  | <b>include</b>     | restriction of xs:token |       | all     | optional |
|  | <b>required</b>    | restriction of xs:token |       | false   | optional |

## Element exclude

|            |   |                 |       |         |          |
|------------|---|-----------------|-------|---------|----------|
| Namespace  | No namespace  |                 |       |         |          |
| Diagram    |  |                 |       |         |          |
| Used by    | Element   | auto-parameters |       |         |          |
| Attributes | QName   | Type            | Fixed | Default | Use      |
|            | <b>field-name</b>   | xs:string       |       |         | required |

## Element parameter

|            |  |  |       |         |          |
|------------|--|--|-------|---------|----------|
| Namespace  | No namespace   |  |       |         |          |
| Diagram    |  |  |       |         |          |
| Used by    | Elements   | in-parameters, out-parameters, parameter |       |         |          |
| Instance   | <pre>&lt;parameter allow-html="none" default-value="" format="" name="" required="false" type="String"&gt;   &lt;description&gt;{0,1}&lt;/description&gt;   &lt;subtype key="" type=""&gt;{0,unbounded}&lt;/subtype&gt;   &lt;parameter allow-html="none" default-value="" format="" name="" required="false" type="String"&gt;{0,unbounded}&lt;/parameter&gt;   &lt;ParameterValidations&gt;{0,unbounded}&lt;/ParameterValidations&gt; &lt;/parameter&gt;</pre> |  |       |         |          |
| Attributes | QName  | Type                                     | Fixed | Default | Use      |
|            | allow-html   | restriction of xs:token                  |       | none    | optional |
|            | Applies only to String fields. Only checked for incoming parameters (meant for validating input from users, other systems, etc). Defaults to "none" meaning no HTML is allowed (will result in an error message). <p>If some HTML is desired then use "safe" which will follow the rules in the antisamy-esapi.xml file.</p> <p>This should be safe for both internal and public users.</p>  |  |       |         |          |

| QName                | Type   | Fixed | Default | Use      |
|----------------------|--|-------|---------|----------|
|                      | In rare cases when users are trusted or it is not a sensitive field the "any" option may be used to not check the HTML content at all.   |       |         |          |
| <b>default-value</b> | xs:string  |       |         | optional |
|                      | The value specified will be used for the parameter if no value is passed in (only used if required=false).   |       |         |          |
| <b>format</b>        | xs:string  |       |         | optional |
|                      | Used only when the parameter is passed in as a String but the type is something other than String to convert to that type.<br><br>For date/time uses standard Java format strings described here:<br><a href="http://download.oracle.com/javase/6/docs/api/java/text/SimpleDateFormat.html">http://download.oracle.com/javase/6/docs/api/java/text/SimpleDateFormat.html</a> |       |         |          |
| <b>name</b>          | xs:string  |       |         | required |
| <b>required</b>      | restriction of xs:token  |       | false   | optional |
| <b>type</b>          | xs:string  |       | String  | optional |

## Element subtype

|             |  |           |       |         |          |
|-------------|--|-----------|-------|---------|----------|
| Namespace   | No namespace   |           |       |         |          |
| Annotations | <p>The valid type if the parameter.type or the parent subtype is a Map or any type of collection.</p> <p>If the parent type is a Map then the key should be a String and the value should be the type of the subtype where the key attribute matches the Map key, or for all other Map keys not specified the subtype with no key specified.</p> |           |       |         |          |
| Diagram     |  |           |       |         |          |
| Used by     | Elements parameter, subtype  |           |       |         |          |
| Instance    | <pre>&lt;subtype key="" type=""&gt;   &lt;subtype key="" type=""&gt;{0,unbounded}&lt;/subtype&gt; &lt;/subtype&gt;</pre>   |           |       |         |          |
| Attributes  | QName  | Type      | Fixed | Default | Use      |
|             | <b>key</b>   | xs:string |       |         | optional |
|             | <b>type</b>  | xs:string |       |         | required |

## Element ParameterValidations

|           |              |
|-----------|--------------|
| Namespace | No namespace |
|-----------|--------------|

|         |   |
|---------|---|
| Diagram |   |
| Used by | Elements<br>parameter, val-and, val-not, val-or |

## Element out-parameters

|           |   |
|-----------|---|
| Namespace | No namespace  |
| Diagram   |   |
| Used by   | Element<br>service  |
| Instance  | <pre>&lt;out-parameters&gt;   &lt;auto-parameters allow-html="none" entity-name="" include="all" required="false"&gt;{1,1}&lt;/ auto-parameters&gt;   &lt;parameter allow-html="none" default- value="" format="" name="" required="false" type="String"&gt;{1,1}&lt;/parameter&gt; &lt;/out-parameters&gt;</pre> |

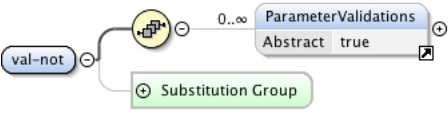
## Element val-or

|           |  |
|-----------|--|
| Namespace | No namespace   |
| Diagram   |  |
| Instance  | <pre>&lt;val-or&gt;   &lt;ParameterValidations&gt;{0,unbounded}&lt;/ParameterValidations&gt; &lt;/val-or&gt;</pre> |

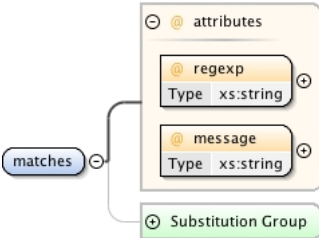
## Element val-and

|           |  |
|-----------|--|
| Namespace | No namespace   |
| Diagram   |  |
| Instance  | <pre>&lt;val-and&gt;   &lt;ParameterValidations&gt;{0,unbounded}&lt;/ParameterValidations&gt; &lt;/val-and&gt;</pre> |

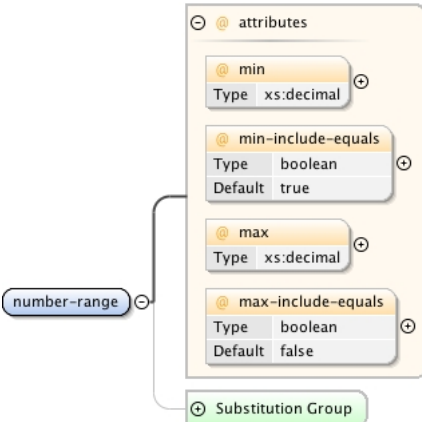
## Element val-not

|           |  |
|-----------|--|
| Namespace | No namespace   |
| Diagram   |  The diagram shows the 'val-not' element connected to a 'Substitution Group' box. This box is linked to a 'ParameterValidations' element, which has a cardinality of '0..∞' and is marked as 'Abstract true'. |
| Instance  | <pre>&lt;val-not&gt;   &lt;ParameterValidations&gt;{0,unbounded}&lt;/ParameterValidations&gt; &lt;/val-not&gt;</pre>   |

## Element matches

|             |  |           |       |         |          |
|-------------|--|-----------|-------|---------|----------|
| Namespace   | No namespace   |           |       |         |          |
| Annotations | Validate the current parameter against the regular expression specified in the regexp attribute. |           |       |         |          |
| Diagram     |                 |           |       |         |          |
| Attributes  | QName  | Type      | Fixed | Default | Use      |
|             | message  | xs:string |       |         | required |
|             | regexp   | xs:string |       |         | required |

## Element number-range

| Namespace  | No namespace   |       |         |          |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |
|--|--|-------|---------|----------|---------|-----|-----|------------|--|--|----------|--|--|--|--|--|--------------------|---------|--|-------|----------|--|--|--|--|--|-----|------------|--|--|----------|---|--|--|--|--|--------------------|---------|--|------|----------|---|--|--|--|--|
| Diagram  |   |       |         |          |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |
| Attributes   | <table><thead><tr><th>QName</th><th>Type</th><th>Fixed</th><th>Default</th><th>Use</th></tr></thead><tbody><tr><td>max</td><td>xs:decimal</td><td></td><td></td><td>optional</td></tr><tr><td colspan="5">To pass number must be less than this value.</td></tr><tr><td>max-include-equals</td><td>boolean</td><td></td><td>false</td><td>optional</td></tr><tr><td colspan="5">Should the range include equal to the max number? Defaults to false (exclusive).</td></tr><tr><td>min</td><td>xs:decimal</td><td></td><td></td><td>optional</td></tr><tr><td colspan="5">To pass number must be greater than or equal to this value.</td></tr><tr><td>min-include-equals</td><td>boolean</td><td></td><td>true</td><td>optional</td></tr><tr><td colspan="5">Should the range include equal to the min number? Defaults to true.</td></tr></tbody></table> | QName | Type    | Fixed    | Default | Use | max | xs:decimal |  |  | optional | To pass number must be less than this value. |  |  |  |  | max-include-equals | boolean |  | false | optional | Should the range include equal to the max number? Defaults to false (exclusive). |  |  |  |  | min | xs:decimal |  |  | optional | To pass number must be greater than or equal to this value. |  |  |  |  | min-include-equals | boolean |  | true | optional | Should the range include equal to the min number? Defaults to true. |  |  |  |  |
| QName  | Type   | Fixed | Default | Use      |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |
| max  | xs:decimal   |       |         | optional |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |
| To pass number must be less than this value.                                     |  |       |         |          |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |
| max-include-equals   | boolean  |       | false   | optional |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |
| Should the range include equal to the max number? Defaults to false (exclusive). |  |       |         |          |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |
| min  | xs:decimal   |       |         | optional |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |
| To pass number must be greater than or equal to this value.                      |  |       |         |          |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |
| min-include-equals   | boolean  |       | true    | optional |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |
| Should the range include equal to the min number? Defaults to true.              |  |       |         |          |         |     |     |            |  |  |          |  |  |  |  |  |                    |         |  |       |          |  |  |  |  |  |     |            |  |  |          |   |  |  |  |  |                    |         |  |      |          |   |  |  |  |  |

## Element number-integer

|           |              |
|-----------|--------------|
| Namespace | No namespace |
|-----------|--------------|

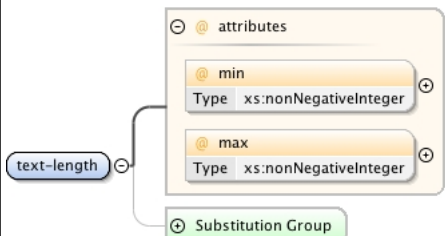


|         |   |
|---------|---|
| Diagram |  |
|---------|---|

## Element number-decimal

|           |   |
|-----------|---|
| Namespace | No namespace  |
| Diagram   |  |

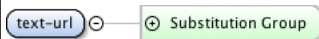
## Element text-length

|            |   |                       |              |                |            |
|------------|---|-----------------------|--------------|----------------|------------|
| Namespace  | No namespace  |                       |              |                |            |
| Diagram    |  |                       |              |                |            |
| Attributes | <b>QName</b>  | <b>Type</b>           | <b>Fixed</b> | <b>Default</b> | <b>Use</b> |
|            | max   | xs:nonNegativeInteger |              |                | optional   |
|            | min   | xs:nonNegativeInteger |              |                | optional   |

## Element text-email

|           |   |
|-----------|---|
| Namespace | No namespace  |
| Diagram   |  |

## Element text-url

|           |   |
|-----------|---|
| Namespace | No namespace  |
| Diagram   |  |

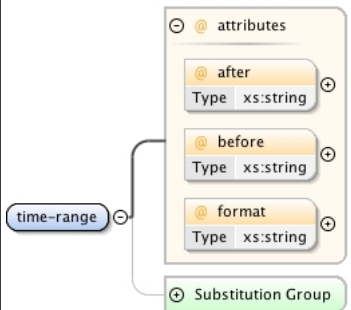
## Element text-letters

|           |   |
|-----------|---|
| Namespace | No namespace  |
| Diagram   |  |

## Element text-digits

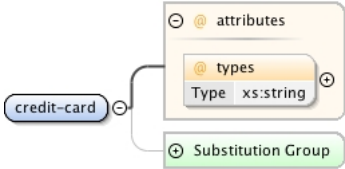
|           |   |
|-----------|---|
| Namespace | No namespace  |
| Diagram   |  |

## Element time-range

|           |   |  |  |  |  |
|-----------|---|--|--|--|--|
| Namespace | No namespace  |  |  |  |  |
| Diagram   |  |  |  |  |  |

| Attributes | QName  | Type      | Fixed | Default | Use      |
|------------|--|-----------|-------|---------|----------|
|            | <b>after</b>   | xs:string |       |         | optional |
|            | Can be date/time string, or "now" to compare to the current time.                                |           |       |         |          |
|            | <b>before</b>  | xs:string |       |         | optional |
|            | Can be date/time string, or "now" to compare to the current time.                                |           |       |         |          |
|            | <b>format</b>  | xs:string |       |         | optional |
|            | If the value is a String instead of Date/Time/Timestamp, specify the format for conversion here. |           |       |         |          |

## Element credit-card

| Namespace  | No namespace   |           |       |         |          |
|------------|--|-----------|-------|---------|----------|
| Diagram    |   |           |       |         |          |
| Attributes | QName  | Type      | Fixed | Default | Use      |
|            | <b>types</b>   | xs:string |       |         | optional |
|            | <p>A comma-separated list of the types of credit card to allow. The available options include:<br/>visa,mastercard,amex,discover,dinersclub</p> <p>If empty defaults to allow any type of card (ie doesn't check the card type, just checks the number using the Luhn MOD-10 checksum).</p> <p>NOTE: removed with updated for Validator 1.4.0: enrout, jcb, solo, switch, visaelectron</p> |           |       |         |          |