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|  | Security Framework |
| Version 1.0 |  |
| Access Controller user's guide | |



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# Introduction

This document describes the access controller subsystem. It allows to control access to internal and external resources such as Web pages.

# Configuration files structure

Configuration is a set of XML documents. Each Security Framework subsystem has a separate configuration file. There is a root configuration file - MtSfConfigurationLoader.xml that references all subsystem’s configuration files.

Please see the section “2.1. Security Monitor configuration reference” in the Security Monitor user’s guide for the root configuration file reference.

The **Access Controller** configuration file structure at high level is shown below:

|  |
| --- |
| <SubsystemProperties IsRuntimeApiEnabled="true" IsRuntimeApiPublic="true" IsControlApiEnabled="true" IsControlApiPublic="true">  <Engines>  <Engine />  <Engine />  </Engines>  </SubsystemProperties> |

The following sections describe attributes, elements, and child elements.

## SubsystemProperties

Root element. It’s not required but recommended do not change the element’s name. It matches with name of the class that takes the configuration properties when it is loading.

There are the following child elements and attributes under the root.

Attributes:

| Attribute | Description |
| --- | --- |
| IsRuntimeApiEnabled | Required attribute.  Indicates whether the Security Monitor API is enabled. Prevents the API from initializing if set to **false**.  **Recomended value is «true».** |
| IsRuntimeApiPublic | Required attribute.  Indicates whether the Security Monitor API is exposed to public access.  **Recomended value is «true».** |
| IsControlApiEnabled | Required attribute.  Indicates whether the Security Monitor control API is enabled. Prevents the control API from initializing if set to **false**. *For future use*.  **Recomended value is «true».** |
| IsControlApiPublic | Required attribute.  Indicates whether the Security Monitor control API is exposed to public access. *For future use*.  **Recomended value is «true».** |

Elements:

| Element | Description |
| --- | --- |
| Engines | Required element.  Defines available engines and their properties. |

The element’s structure is described below.

## Access Controller configuration file structure

The **Access Controller** configuration file structure at high level is shown below:

|  |
| --- |
| <SubsystemProperties IsRuntimeApiEnabled="true" IsRuntimeApiPublic="true" IsControlApiEnabled="true" IsControlApiPublic="true">  <Engines>  <Engine>  <Items>  <Item />  <Item />  <Item />  </Items>  </Engine>  </Engines>  </SubsystemProperties> |

The following sections describe attributes, elements, and child elements.

### **Engines**

Contains elements with properties **Access Controller** engine. Each engine type **Access Controller** contains elements to control access to requested resources.

<SubsystemProperties>

<Engines>

|  |
| --- |
| <Engine Id="<AccessController\_Engine\_ID>" IsDefault="True|False" RealType="EngineType" >  <Items>  …  </Items>  </Engine> |

Child elements and attributes for properties of engine are described below:

| Attribute | Description |
| --- | --- |
| Id | Required attribute.  Defines a unique item ID. Uses internally. |
| RealType | Required attribute.  Defines a engine type. Must be “**MetraTech.SecurityFramework.AccessControllerEngineBase**” inherited.  Available types:  - **MetraTech.SecurityFramework.UrlAccessControllerEngine** – provides a type for engine for acces to external URL checking. |
| IsDefault | Required attribute.  Specifies whether the engine is default for its category. Default value is «**false**». |
| Items | Required element.  Items collection. These items contain data of control access to requested resource. |

### UrlAccessControllerEngine

**UrlAccessControllerEngine –** this engine type to control access to external URL resource. If resource is allowed, this engine returned his description. Else throwing exception of **AccessControllerException** type.

#### AccessItemUrl

This class contains properties of controlled resource URL.

Configuring section attributes for items of type **AccessItemUrl**.

<SubsystemProperties>

<Engines>

<Engine>

|  |
| --- |
| <Items>  <Item Name="Resource\_name" Description="Current\_resource\_description" AccessType="Allowed | Denied" Url="Absolute\_URI" />  </Items> |

Contains elements with item properties. Child attributes for properties of item are described below:

| Attribute | Description |
| --- | --- |
| Name | Required attribute.  Contain resource name. |
| Descriotion | Required attribute.  Contain resource description. This value is returned if the engine of **Access Controller** subsystem worked without error. |
| AccessType | Required attribute.  Contain access type to resource.  - **Allowed** – access to external URL is allowed.  - **Denied** – access to external URL is denied. |
| Url | Required attribute.  Contain URI address of external resource. Should include domain name of resource. |

# 3. Example: Access Controller engine configuration and API.

Below describe example for access controller "AccessController.Url.V1" configuration.

<Engines>

|  |
| --- |
| <Engine Id="AccessController.Url.V1" IsDefault="true" RealType="MetraTech.SecurityFramework.UrlAccessControllerEngine, MetraTech.SecurityFramework">  <Items>  <Item Name="MetraTech" Description="Access is allowed" AccessType="Allowed" Url=" metratech.com" />  </Items>  </Engine> |

using MetraTech.SecurityFramework;

…

string input = "http://metratech.com";

ApiOutput output = SecurityKernel.AccessController.Api.ExecuteDefaultByCategory(AccessControllerEngineCategory.UrlController.ToString(), new ApiInput(input));

// returns "Access is allowed";

…

string input = "http://google.com";

ApiOutput output = SecurityKernel.AccessController.Api.ExecuteDefaultByCategory(AccessControllerEngineCategory.UrlController.ToString(), new ApiInput(input));

// throwing exception of AccessControllerException type