

Custom / Risks

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API Version: 1.0.0

Manage the risk on the construction site.

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API

1. POTENTIALLY_TRIGGER_ALERT

1.1 POST /potentially_trigger_alert

Potentially Trigger Alert

REQUEST

REQUEST BODY - application/json

```
{  
  Represent the state of the actor that might trigger an alert.  
  actor_guid* string PATTERN:^[a-zA-Z0-9_.-]+$  
  GUID of the actor  
  actor_url* string URL to the description of the actor (*e.g.*, in BIM Extended)  
  position* {  
    Current position of the actor  
    x* number  
    y* number  
    z* number  
  }  
  timestamp* integer Time stamp of the state observation  
}
```

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

undefined

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

```
{  
  detail [{  
    Array of object:  
    loc* [string]  
    msg* string  
    type* string  
  }]  
}
```

2. RISK_ZONES

2.1 GET /risk_zones

List Risk Zones

List GUIDs of all the risk zones.

REQUEST

No request parameters

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

[string]

PATTERN: `^[a-zA-Z0-9_.-]+`

2.2 PUT /risk_zones

Put Risk Zone

Register the risk zone with the service based on its GUID.

REQUEST

REQUEST BODY - application/json

```
{
```

Represent a zone where there is a risk for the people and equipment.

guid*	string	PATTERN: <code>^[a-zA-Z0-9_.-]+</code> Generally unique identifier (GUID) of the zone
name*	string	Human-readable name of the zone
description	string	Human-readable description of the risk zone including the specifics of the risk.
level*	enum	ALLOWED: TRIVIAL, TOLERABLE, MODERATE, SUBSTANTIAL, INTOLERABLE, EVACUATION Level of the risk in the zone

shape* [{

Array of object: Represent a triangle surface in 3D space.

```
  vertices* [undefined]
  normal* {
    Normal of the triangle pointing outwards
    x* number
    y* number
    z* number
  }
}
```

interval_start* integer Time point when the risk starts (seconds since epoch in UTC)

interval_end* integer Time point when the risk ends (seconds since epoch in UTC)

url* string URL to the description of the zone (*e.g.*, in BIM Sync)

```
}
```

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

undefined

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

```
{
  detail [{
    Array of object:
    loc* [string]
    msg* string
    type* string
  }]
}
```

2.3 GET /risk_zones/{guid}

Get Risk Zone

Get the data of the specified risk zone.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*guid	string PATTERN: <code>^[a-zA-Z0-9_-:~]+\$</code>	GUID of the risk zone

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

```
{
  Represent a zone where there is a risk for the people and equipment.
  guid* string PATTERN: ^[a-zA-Z0-9_-:~]+$
  Generally unique identifier (GUID) of the zone
  name* string Human-readable name of the zone
  description string Human-readable description of the risk zone including the specifics of the risk.
  level* enum ALLOWED: TRIVIAL, TOLERABLE, MODERATE, SUBSTANTIAL, INTOLERABLE, EVACUATION
  Level of the risk in the zone
  shape* [{
    Array of object: Represent a triangle surface in 3D space.
    vertices* [undefined]
    normal* {
      Normal of the triangle pointing outwards
      x* number
      y* number
      z* number
    }
  }]
  interval_start* integer Time point when the risk starts (seconds since epoch in UTC)
  interval_end* integer Time point when the risk ends (seconds since epoch in UTC)
  url* string URL to the description of the zone (*e.g.*, in BIM Sync)
}
```

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

```
{
  detail [{
    Array of object:
      loc* [string]
      msg* string
      type* string
    }]
}
```

2.4 DELETE /risk_zones/{guid}

Delete Risk Zone

Unregister the risk zone from the service and delete all the related data.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*guid	string PATTERN: <code>^[a-zA-Z0-9_-:~]+\$</code>	GUID of the risk zone

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

undefined

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

```
{
  detail [{
    Array of object:
      loc* [string]
      msg* string
      type* string
    }]
}
```

2.5 HEAD /risk_zones/{guid}

Head Risk Zone

Check whether the risk zone has been registered with the service.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*guid	string PATTERN: <code>^[a-zA-Z0-9_-:~]+\$</code>	GUID of the risk zone

RESPONSE

STATUS CODE - 200: The risk zone has been registered with the service.

RESPONSE MODEL - application/json

undefined

STATUS CODE - 404: The risk zone has not been registered.

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

```
{
  detail [{
    Array of object:
    loc* [string]
    msg* string
    type* string
  }]
}
```

3. RISKS

3.1 GET /risks

Get Risks

Evaluate the risks corresponding to the query.

REQUEST

REQUEST BODY - application/json

```
{
  Represent a query asking whether the actor is in risk.
  position* {
    The position of the actor
    x* number
    y* number
    z* number
  }
  timestamp* integer Time point for which we want to know the risks
}
```

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

```
[{
  Array of object: Represent a zone where there is a risk for the people and equipment.
  guid*          string    PATTERN:^[a-zA-Z0-9_.-]+$
                  Generally unique identifier (GUID) of the zone
  name*          string    Human-readable name of the zone
  description*   string    Human-readable description of the risk zone including the specifics of the risk.
  level*         enum      ALLOWED:TRIVIAL, TOLERABLE, MODERATE, SUBSTANTIAL,
                          INTOLERABLE, EVACUATION
                  Level of the risk in the zone
  shape* [ {
    Array of object: Represent a triangle surface in 3D space.
    vertices* [undefined]
    normal* {
      Normal of the triangle pointing outwards
      x* number
      y* number
      z* number
    }
  } ]
  interval_start* integer Time point when the risk starts (seconds since epoch in UTC)
  interval_end*   integer Time point when the risk ends (seconds since epoch in UTC)
  url*            string   URL to the description of the zone (*e.g.*, in BIM Sync)
}]
```

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

```
{
  detail [ {
    Array of object:
  } ]
}
```



```
    loc* [string]
    msg* string
    type* string
  }]
}
```
