

# Taiga: Webhooks

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Taiga webhooks notify changes on milestones, user stories, tasks, issues and wiki pages sending POST requests signed with a private key, to the configured urls.

Each project can have any number of webhooks configured on it.

## 1. Configuration

To activate webhooks you must configure taiga-back local settings file `~/taiga-back/settings/local.py` adding the `WEBHOOKS_ENABLED = True`.

Moreover there is another setting to disallow webhooks access to reserved and private address, see [IANA IPv4 Special-Purpose Address](<https://www.iana.org/assignments/iana-ipv4-special-registry/iana-ipv4-special-registry.xhtml>) and [IANA IPv6 Special-Purpose Address](<https://www.iana.org/assignments/iana-ipv6-special-registry/iana-ipv6-special-registry.xhtml>). To activate add also to your settings file `WEBHOOKS_BLOCK_PRIVATE_ADDRESS = True`.

## 2. Request

The request made by the Taiga webhooks can be synchronous or asynchronous (it depends on the Taiga configuration, for example `tree.taiga.io` is `async`). In asynchronous mode those requests to your configured url can have a delay of some seconds.

All request send to the URL are POST with header `Content-Type` equals to `application/json` and a signature of the message in the `X-TAIGA-WEBHOOK-SIGNATURE` HTTP header.

The body of the POST request is just a JSON with the corresponding payload.

### 3. Verify signature

Every request have a header called **X-TAIGA-WEBHOOK-SIGNATURE** that contains the signature generated with [HMAC]([http://en.wikipedia.org/wiki/Hash-based\\_message\\_authentication\\_code](http://en.wikipedia.org/wiki/Hash-based_message_authentication_code)) using sha1 hash.

An example of signature verification in python:

```
def verify_signature(key, data, signature):
    mac = hmac.new(key.encode("utf-8"), msg=data, digestmod=hashlib.sha1)
    return mac.hexdigest() == signature
```

in php:

```
<?php
function verify_signature($key, $data, $signature) {
    return hash_hmac("sha1", $data, $key) == $signature
}
?>
```

### 4. Payloads

The sended request depends on the object type and the kind of change, all payloads have the same base structure

```
{
  "action": "",
  "type": "",
  "by": {}
  "date": ""
  "data": {},
  "change": {}
}
```

- The **action** field contains notification type with values: "create", "delete", "change" or "test".
- The **type** field contains the type of object with values: "milestone", "userstory", "task", "issue", "wikipage" or "test".
- The **by** field contains the information of the user thast generate the notification.
- The **date** field contains the date and time of thwe current notification.
- The **data** field contains the current object information.
- The **change** field (only present on change notifications) contains the information about the changes made.

## 4.1. Test payload

```
{
  "type": "test",
  "by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
  },
  "date": "2016-04-12T12:00:56.335Z",
  "action": "test",
  "data": {
    "test": "test"
  }
}
```

## 4.2. Milestone payloads

### 4.2.1. Create

```

{
  "type": "milestone",
  "by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
  },
  "date": "2016-04-12T12:08:18.309Z",
  "action": "create",
  "data": {
    "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-4",
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "owner": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "id": 13,
    "name": "Sprint 4",
    "slug": "sprint-4",
    "estimated_start": "2016-03-02",
    "estimated_finish": "2016-03-16",
    "created_date": "2016-04-12T12:08:18+0000",
    "modified_date": "2016-04-12T12:08:18+0000",
    "closed": false,
    "disponibility": 0.0
  }
}

```

#### 4.2.2. Delete

```

{
  "type": "milestone",
  "by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
  },
  "date": "2016-04-12T12:13:47.873Z",
  "action": "delete",
  "data": {
    "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-4",
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "owner": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "id": 13,
    "name": "Sprint 4",
    "slug": "sprint-4",
    "estimated_start": "2016-03-02",
    "estimated_finish": "2016-03-24",
    "created_date": "2016-04-12T12:08:18+0000",
    "modified_date": "2016-04-12T12:09:42+0000",
    "closed": false,
    "disponibility": 0.0
  }
}

```

### 4.2.3. Change

```

{
  "type": "milestone",
  "by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",

```

```

    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
  },
  "action": "change",
  "data": {
    "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-4",
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "owner": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "id": 13,
    "name": "Sprint 4",
    "slug": "sprint-4",
    "estimated_start": "2016-03-02",
    "estimated_finish": "2016-03-24",
    "created_date": "2016-04-12T12:08:18+0000",
    "modified_date": "2016-04-12T12:09:42+0000",
    "closed": false,
    "disponibility": 0.0
  },
  "date": "2016-04-12T12:09:42.527Z",
  "change": {
    "diff": {
      "estimated_start": {
        "to": "2016-03-02",
        "from": "2016-03-02"
      },
      "estimated_finish": {
        "to": "2016-03-24",
        "from": "2016-03-16"
      }
    },
    "comment": "",
    "comment_html": "",
    "delete_comment_date": null
  }
}

```

## 4.3. User story data information

### 4.3.1. Create

```
{
  "type": "userstory",
  "date": "2016-04-12T12:17:20.486Z",
  "action": "create",
  "data": {
    "custom_attributes_values": {},
    "watchers": [],
    "permalink": "http://localhost:9001/project/project-0/us/72",
    "tags": [
      "dolorum",
      "adipisci",
      "ipsa"
    ],
    "external_reference": null,
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "owner": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "assigned_to": null,
    "points": [
      {
        "role": "UX",
        "name": "5",
        "value": 5.0
      },
      {
        "role": "Design",
        "name": "1",
        "value": 1.0
      },
      {
        "role": "Front",
        "name": "3",
        "value": 3.0
      }
    ]
  }
}
```

```

        "role": "Back",
        "name": "40",
        "value": 40.0
    }
],
"status": {
    "id": 1,
    "name": "New",
    "slug": "new",
    "color": "#999999",
    "is_closed": false,
    "is_archived": false
},
"milestone": null,
"id": 139,
"is_blocked": true,
"blocked_note": "Blocked test message",
"ref": 72,
"is_closed": false,
"created_date": "2016-04-12T12:17:19+0000",
"modified_date": "2016-04-12T12:17:19+0000",
"finish_date": null,
"subject": "test user story 5",
"description": "this is a test description",
"client_requirement": false,
"team_requirement": true,
"generated_from_issue": null,
"tribe_gig": null
},
"by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
}
}

```

### 4.3.2. Delete

```

{
    "type": "userstory",
    "date": "2016-04-12T12:19:19.433Z",
    "action": "delete",
    "data": {
        "custom_attributes_values": null,
        "watchers": [],
        "permalink": "http://localhost:9001/project/project-0/us/72",
        "tags": [

```



```

        "dolorum",
        "adipisci",
        "ipsa"
    ],
    "external_reference": null,
    "project": {
        "id": 1,
        "permalink": "http://localhost:9001/project/project-0",
        "name": "Project Example 0",
        "logo_big_url": null
    },
    "owner": {
        "id": 6,
        "permalink": "http://localhost:9001/profile/user1",
        "username": "user1",
        "full_name": "Purificacion Montero",
        "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
        "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "assigned_to": null,
    "points": [],
    "status": {
        "id": 1,
        "name": "New",
        "slug": "new",
        "color": "#999999",
        "is_closed": false,
        "is_archived": false
    },
    "milestone": {
        "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-
2016-2-16",
        "project": {
            "id": 1,
            "permalink": "http://localhost:9001/project/project-0",
            "name": "Project Example 0",
            "logo_big_url": null
        },
        "owner": {
            "id": 4,
            "permalink": "http://localhost:9001/profile/admin",
            "username": "admin",
            "full_name": "Administrator",
            "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
            "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
        },
        "id": 1,
        "name": "Sprint 2016-2-16",
        "slug": "sprint-2016-2-16",
        "estimated_start": "2016-02-16",
        "estimated_finish": "2016-03-02",
    }

```

```

        "created_date": "2016-02-16T13:15:03+0000",
        "modified_date": "2016-04-11T13:15:03+0000",
        "closed": false,
        "disponibility": 0.0
    },
    "id": 139,
    "is_blocked": true,
    "blocked_note": "Blocked test message",
    "ref": 72,
    "is_closed": false,
    "created_date": "2016-04-12T12:17:19+0000",
    "modified_date": "2016-04-12T12:18:19+0000",
    "finish_date": null,
    "subject": "test user story 5",
    "description": "this is a test description",
    "client_requirement": false,
    "team_requirement": true,
    "generated_from_issue": null,
    "tribe_gig": null
},
"by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
}
}

```

### 4.3.3. Change

```

{
    "type": "userstory",
    "date": "2016-04-12T12:18:19.685Z",
    "change": {
        "diff": {
            "milestone": {
                "to": "Sprint 2016-2-16",
                "from": null
            }
        },
        "comment": "",
        "comment_html": "",
        "delete_comment_date": null
    },
    "action": "change",
    "data": {
        "custom_attributes_values": {},
        "watchers": [],
    }
}

```

```

"permalink": "http://localhost:9001/project/project-0/us/72",
"tags": [
  "dolorum",
  "adipisci",
  "ipsa"
],
"external_reference": null,
"project": {
  "id": 1,
  "permalink": "http://localhost:9001/project/project-0",
  "name": "Project Example 0",
  "logo_big_url": null
},
"owner": {
  "id": 6,
  "permalink": "http://localhost:9001/profile/user1",
  "username": "user1",
  "full_name": "Purificacion Montero",
  "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
  "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
},
"assigned_to": null,
"points": [
  {
    "role": "UX",
    "name": "5",
    "value": 5.0
  },
  {
    "role": "Design",
    "name": "1",
    "value": 1.0
  },
  {
    "role": "Front",
    "name": "3",
    "value": 3.0
  },
  {
    "role": "Back",
    "name": "40",
    "value": 40.0
  }
],
"status": {
  "id": 1,
  "name": "New",
  "slug": "new",
  "color": "#999999",
  "is_closed": false,
  "is_archived": false
}

```

```

    },
    "milestone": {
      "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-
2016-2-16",
      "project": {
        "id": 1,
        "permalink": "http://localhost:9001/project/project-0",
        "name": "Project Example 0",
        "logo_big_url": null
      },
      "owner": {
        "id": 4,
        "permalink": "http://localhost:9001/profile/admin",
        "username": "admin",
        "full_name": "Administrator",
        "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
        "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
      },
      "id": 1,
      "name": "Sprint 2016-2-16",
      "slug": "sprint-2016-2-16",
      "estimated_start": "2016-02-16",
      "estimated_finish": "2016-03-02",
      "created_date": "2016-02-16T13:15:03+0000",
      "modified_date": "2016-04-11T13:15:03+0000",
      "closed": false,
      "disponibility": 0.0
    },
    "id": 139,
    "is_blocked": true,
    "blocked_note": "Blocked test message",
    "ref": 72,
    "is_closed": false,
    "created_date": "2016-04-12T12:17:19+0000",
    "modified_date": "2016-04-12T12:18:19+0000",
    "finish_date": null,
    "subject": "test user story 5",
    "description": "this is a test description",
    "client_requirement": false,
    "team_requirement": true,
    "generated_from_issue": null,
    "tribe_gig": null
  },
  "by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
  }
}

```

```
}
```

## 4.4. Task data information

### 4.4.1. Create

```
{
  "type": "task",
  "date": "2016-04-12T12:20:54.758Z",
  "action": "create",
  "data": {
    "custom_attributes_values": {},
    "watchers": [],
    "permalink": "http://localhost:9001/project/project-0/task/73",
    "tags": [
      "dolorem"
    ],
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "owner": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "assigned_to": {
      "id": 10,
      "permalink": "http://localhost:9001/profile/user5",
      "username": "user5",
      "full_name": "Alicia Flores",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "status": {
      "id": 2,
      "name": "In progress",
      "slug": "in-progress",
      "color": "#ff9900",
      "is_closed": false
    },
    "user_story": {
      "custom_attributes_values": {
        "eius vero facere": "repellat"
      }
    }
  }
}
```

```

    },
    "watchers": [
        1
    ],
    "permalink": "http://localhost:9001/project/project-0/us/6",
    "tags": [
        "quam",
        "nulla"
    ],
    },
    "external_reference": null,
    "project": {
        "id": 1,
        "permalink": "http://localhost:9001/project/project-0",
        "name": "Project Example 0",
        "logo_big_url": null
    },
    "owner": {
        "id": 8,
        "permalink": "http://localhost:9001/profile/user3",
        "username": "user3",
        "full_name": "Concepcion Garrido",
        "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
        "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "assigned_to": {
        "id": 13,
        "permalink": "http://localhost:9001/profile/user8",
        "username": "user8",
        "full_name": "Lourdes Aguilar",
        "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
        "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "points": [
        {
            "role": "UX",
            "name": "8",
            "value": 8.0
        },
        {
            "role": "Design",
            "name": "10",
            "value": 10.0
        },
        {
            "role": "Front",
            "name": "0",
            "value": 0.0
        },
        {
            "role": "Back",
            "name": "40",

```

```

        "value": 40.0
      }
    ],
    "status": {
      "id": 4,
      "name": "Ready for test",
      "slug": "ready-for-test",
      "color": "#fcc000",
      "is_closed": false,
      "is_archived": false
    },
    "milestone": {
      "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-2016-2-16",
      "project": {
        "id": 1,
        "permalink": "http://localhost:9001/project/project-0",
        "name": "Project Example 0",
        "logo_big_url": null
      },
      "owner": {
        "id": 4,
        "permalink": "http://localhost:9001/profile/admin",
        "username": "admin",
        "full_name": "Administrator",
        "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
        "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
      },
      "id": 1,
      "name": "Sprint 2016-2-16",
      "slug": "sprint-2016-2-16",
      "estimated_start": "2016-02-16",
      "estimated_finish": "2016-03-02",
      "created_date": "2016-02-16T13:15:03+0000",
      "modified_date": "2016-04-11T13:15:03+0000",
      "closed": false,
      "disponibility": 0.0
    },
    "id": 2,
    "is_blocked": false,
    "blocked_note": "",
    "ref": 6,
    "is_closed": false,
    "created_date": "2016-04-11T13:15:04+0000",
    "modified_date": "2016-04-11T13:15:04+0000",
    "finish_date": null,
    "subject": "Implement the form",
    "description": "Voluptas odio a minus ipsam blanditiis rem, blanditiis...",
    "client_requirement": false,
    "team_requirement": false,

```

```

        "generated_from_issue": null,
        "tribe_gig": null
    },
    "milestone": {
        "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-
2016-2-16",
        "project": {
            "id": 1,
            "permalink": "http://localhost:9001/project/project-0",
            "name": "Project Example 0",
            "logo_big_url": null
        },
        "owner": {
            "id": 4,
            "permalink": "http://localhost:9001/profile/admin",
            "username": "admin",
            "full_name": "Administrator",
            "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
            "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
        },
        "id": 1,
        "name": "Sprint 2016-2-16",
        "slug": "sprint-2016-2-16",
        "estimated_start": "2016-02-16",
        "estimated_finish": "2016-03-02",
        "created_date": "2016-02-16T13:15:03+0000",
        "modified_date": "2016-04-11T13:15:03+0000",
        "closed": false,
        "disponibility": 0.0
    },
    "id": 163,
    "is_blocked": true,
    "blocked_note": "blocked note message",
    "ref": 73,
    "created_date": "2016-04-12T12:20:54+0000",
    "modified_date": "2016-04-12T12:20:54+0000",
    "finished_date": null,
    "subject": "test task",
    "us_order": 1,
    "taskboard_order": 1,
    "description": "Task description example",
    "is_iocaine": true,
    "external_reference": null
},
"by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
}

```



```
}  
}
```

#### 4.4.2. Delete

```
{  
  "data": {  
    "custom_attributes_values": null,  
    "watchers": [],  
    "permalink": "http://localhost:9001/project/project-0/task/73",  
    "tags": [  
      "dolorem"  
    ],  
    "project": {  
      "id": 1,  
      "permalink": "http://localhost:9001/project/project-0",  
      "name": "Project Example 0",  
      "logo_big_url": null  
    },  
    "owner": {  
      "id": 6,  
      "permalink": "http://localhost:9001/profile/user1",  
      "username": "user1",  
      "full_name": "Purificacion Montero",  
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",  
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"  
    },  
    "assigned_to": {  
      "id": 4,  
      "permalink": "http://localhost:9001/profile/admin",  
      "username": "admin",  
      "full_name": "Administrator",  
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",  
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"  
    },  
    "status": {  
      "id": 2,  
      "name": "In progress",  
      "slug": "in-progress",  
      "color": "#ff9900",  
      "is_closed": false  
    },  
    "user_story": {  
      "custom_attributes_values": {  
        "eius vero facere": "repellat"  
      },  
      "watchers": [  
        1  
      ],  
      "permalink": "http://localhost:9001/project/project-0/us/6",  
    },  
  },  
}
```

```

"tags": [
  "quam",
  "nulla"
],
"external_reference": null,
"project": {
  "id": 1,
  "permalink": "http://localhost:9001/project/project-0",
  "name": "Project Example 0",
  "logo_big_url": null
},
"owner": {
  "id": 8,
  "permalink": "http://localhost:9001/profile/user3",
  "username": "user3",
  "full_name": "Concepcion Garrido",
  "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
  "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
},
"assigned_to": {
  "id": 13,
  "permalink": "http://localhost:9001/profile/user8",
  "username": "user8",
  "full_name": "Lourdes Aguilar",
  "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
  "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
},
"points": [
  {
    "role": "UX",
    "name": "8",
    "value": 8.0
  },
  {
    "role": "Design",
    "name": "10",
    "value": 10.0
  },
  {
    "role": "Front",
    "name": "0",
    "value": 0.0
  },
  {
    "role": "Back",
    "name": "40",
    "value": 40.0
  }
],
"status": {
  "id": 4,

```

```

    "name": "Ready for test",
    "slug": "ready-for-test",
    "color": "#fcc000",
    "is_closed": false,
    "is_archived": false
  },
  "milestone": {
    "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-2016-2-16",
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "owner": {
      "id": 4,
      "permalink": "http://localhost:9001/profile/admin",
      "username": "admin",
      "full_name": "Administrator",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "id": 1,
    "name": "Sprint 2016-2-16",
    "slug": "sprint-2016-2-16",
    "estimated_start": "2016-02-16",
    "estimated_finish": "2016-03-02",
    "created_date": "2016-02-16T13:15:03+0000",
    "modified_date": "2016-04-11T13:15:03+0000",
    "closed": false,
    "disponibility": 0.0
  },
  "id": 2,
  "is_blocked": false,
  "blocked_note": "",
  "ref": 6,
  "is_closed": false,
  "created_date": "2016-04-11T13:15:04+0000",
  "modified_date": "2016-04-11T13:15:04+0000",
  "finish_date": null,
  "subject": "Implement the form",
  "description": "Voluptas odio a minus ipsam blanditiis rem, blanditiis corrupti odio expedita nihil consequuntur possimus sequi, quia eos obcaecati hic molestias quam similique ratione neque, ex eveniet hic ipsam minus animi cumque beatae deserunt fugit eos, mollitia aut veritatis quisquam delectus ipsum ex in?",
  "client_requirement": false,
  "team_requirement": false,
  "generated_from_issue": null,
  "tribe_gig": null
},

```

```

    "milestone": {
      "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-
2016-2-16",
      "project": {
        "id": 1,
        "permalink": "http://localhost:9001/project/project-0",
        "name": "Project Example 0",
        "logo_big_url": null
      },
      "owner": {
        "id": 4,
        "permalink": "http://localhost:9001/profile/admin",
        "username": "admin",
        "full_name": "Administrator",
        "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
"gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
      },
      "id": 1,
      "name": "Sprint 2016-2-16",
      "slug": "sprint-2016-2-16",
      "estimated_start": "2016-02-16",
      "estimated_finish": "2016-03-02",
      "created_date": "2016-02-16T13:15:03+0000",
      "modified_date": "2016-04-11T13:15:03+0000",
      "closed": false,
      "disponibility": 0.0
    },
    "id": 163,
    "is_blocked": true,
    "blocked_note": "blocked note message",
    "ref": 73,
    "created_date": "2016-04-12T12:20:54+0000",
    "modified_date": "2016-04-12T12:21:40+0000",
    "finished_date": null,
    "subject": "test task",
    "us_order": 1,
    "taskboard_order": 1,
    "description": "Task description example",
    "is_iocaine": true,
    "external_reference": null
  },
  "type": "task",
  "action": "delete",
  "date": "2016-04-12T12:28:18.750Z",
  "by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
  }
}

```

```
}  
}
```

#### 4.4.3. Change

```
{  
  "action": "change",  
  "by": {  
    "id": 6,  
    "permalink": "http://localhost:9001/profile/user1",  
    "username": "user1",  
    "full_name": "Purificacion Montero",  
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",  
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"  
  },  
  "type": "task",  
  "data": {  
    "custom_attributes_values": {},  
    "watchers": [],  
    "permalink": "http://localhost:9001/project/project-0/task/73",  
    "tags": [  
      "dolorem"  
    ],  
    "project": {  
      "id": 1,  
      "permalink": "http://localhost:9001/project/project-0",  
      "name": "Project Example 0",  
      "logo_big_url": null  
    },  
    "owner": {  
      "id": 6,  
      "permalink": "http://localhost:9001/profile/user1",  
      "username": "user1",  
      "full_name": "Purificacion Montero",  
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",  
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"  
    },  
    "assigned_to": {  
      "id": 4,  
      "permalink": "http://localhost:9001/profile/admin",  
      "username": "admin",  
      "full_name": "Administrator",  
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",  
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"  
    },  
    "status": {  
      "id": 2,  
      "name": "In progress",  
      "slug": "in-progress",  
      "color": "#ff9900",  
    }  
  }  
}
```

```

    "is_closed": false
  },
  "user_story": {
    "custom_attributes_values": {
      "eius vero facere": "repellat"
    },
    "watchers": [
      1
    ],
    "permalink": "http://localhost:9001/project/project-0/us/6",
    "tags": [
      "quam",
      "nulla"
    ],
    "external_reference": null,
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "owner": {
      "id": 8,
      "permalink": "http://localhost:9001/profile/user3",
      "username": "user3",
      "full_name": "Concepcion Garrido",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "assigned_to": {
      "id": 13,
      "permalink": "http://localhost:9001/profile/user8",
      "username": "user8",
      "full_name": "Lourdes Aguilar",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "points": [
      {
        "role": "UX",
        "name": "8",
        "value": 8.0
      },
      {
        "role": "Design",
        "name": "10",
        "value": 10.0
      },
      {
        "role": "Front",
        "name": "0",

```

```

        "value": 0.0
      },
      {
        "role": "Back",
        "name": "40",
        "value": 40.0
      }
    ],
    "status": {
      "id": 4,
      "name": "Ready for test",
      "slug": "ready-for-test",
      "color": "#fcc000",
      "is_closed": false,
      "is_archived": false
    },
    "milestone": {
      "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-2016-2-16",
      "project": {
        "id": 1,
        "permalink": "http://localhost:9001/project/project-0",
        "name": "Project Example 0",
        "logo_big_url": null
      },
      "owner": {
        "id": 4,
        "permalink": "http://localhost:9001/profile/admin",
        "username": "admin",
        "full_name": "Administrator",
        "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
        "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
      },
      "id": 1,
      "name": "Sprint 2016-2-16",
      "slug": "sprint-2016-2-16",
      "estimated_start": "2016-02-16",
      "estimated_finish": "2016-03-02",
      "created_date": "2016-02-16T13:15:03+0000",
      "modified_date": "2016-04-11T13:15:03+0000",
      "closed": false,
      "disponibility": 0.0
    },
    "id": 2,
    "is_blocked": false,
    "blocked_note": "",
    "ref": 6,
    "is_closed": false,
    "created_date": "2016-04-11T13:15:04+0000",
    "modified_date": "2016-04-11T13:15:04+0000",
    "finish_date": null,

```

```

        "subject": "Implement the form",
        "description": "Voluptas odio a minus ipsam blanditiis rem,
blanditiis...",
        "client_requirement": false,
        "team_requirement": false,
        "generated_from_issue": null,
        "tribe_gig": null
    },
    "milestone": {
        "permalink": "http://localhost:9001/project/project-0/taskboard/sprint-
2016-2-16",
        "project": {
            "id": 1,
            "permalink": "http://localhost:9001/project/project-0",
            "name": "Project Example 0",
            "logo_big_url": null
        },
        "owner": {
            "id": 4,
            "permalink": "http://localhost:9001/profile/admin",
            "username": "admin",
            "full_name": "Administrator",
            "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
            "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
        },
        "id": 1,
        "name": "Sprint 2016-2-16",
        "slug": "sprint-2016-2-16",
        "estimated_start": "2016-02-16",
        "estimated_finish": "2016-03-02",
        "created_date": "2016-02-16T13:15:03+0000",
        "modified_date": "2016-04-11T13:15:03+0000",
        "closed": false,
        "disponibility": 0.0
    },
    "id": 163,
    "is_blocked": true,
    "blocked_note": "blocked note message",
    "ref": 73,
    "created_date": "2016-04-12T12:20:54+0000",
    "modified_date": "2016-04-12T12:21:40+0000",
    "finished_date": null,
    "subject": "test task",
    "us_order": 1,
    "taskboard_order": 1,
    "description": "Task description example",
    "is_iocaine": true,
    "external_reference": null
},
"date": "2016-04-12T12:21:40.603Z",
"change": {

```



```

    "diff": {
      "assigned_to": {
        "from": "Alicia Flores",
        "to": "Administrator"
      }
    },
    "comment": "",
    "comment_html": "",
    "delete_comment_date": null
  }
}

```

## 4.5. Issue data information

### 4.5.1. Create

```

{
  "data": {
    "custom_attributes_values": {},
    "watchers": [],
    "permalink": "http://localhost:9001/project/project-0/issue/75",
    "tags": [
      "officia",
      "delectus"
    ],
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "milestone": null,
    "owner": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "assigned_to": null,
    "status": {
      "id": 1,
      "name": "New",
      "slug": "new",
      "color": "#8C2318",
      "is_closed": false
    },
    "type": {

```

```

        "id": 1,
        "name": "Bug",
        "color": "#89BAB4"
    },
    "priority": {
        "id": 1,
        "name": "Low",
        "color": "#666666"
    },
    "severity": {
        "id": 4,
        "name": "Important",
        "color": "#FFA500"
    },
    "id": 95,
    "is_blocked": false,
    "blocked_note": "",
    "ref": 75,
    "created_date": "2016-04-12T12:48:12+0000",
    "modified_date": "2016-04-12T12:48:12+0000",
    "finished_date": null,
    "subject": "Test issue 3",
    "description": "Test issue description",
    "external_reference": null
},
"type": "issue",
"action": "create",
"date": "2016-04-12T12:48:13.089Z",
"by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
}
}

```

#### 4.5.2. Delete

```

{
  "data": {
    "custom_attributes_values": null,
    "watchers": [],
    "permalink": "http://localhost:9001/project/project-0/issue/75",
    "tags": [
      "officia",
      "delectus"
    ],
    "project": {

```

```

        "id": 1,
        "permalink": "http://localhost:9001/project/project-0",
        "name": "Project Example 0",
        "logo_big_url": null
    },
    "milestone": null,
    "owner": {
        "id": 6,
        "permalink": "http://localhost:9001/profile/user1",
        "username": "user1",
        "full_name": "Purificacion Montero",
        "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
        "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "assigned_to": null,
    "status": {
        "id": 3,
        "name": "Ready for test",
        "slug": "ready-for-test",
        "color": "#88A65E",
        "is_closed": true
    },
    "type": {
        "id": 1,
        "name": "Bug",
        "color": "#89BAB4"
    },
    "priority": {
        "id": 1,
        "name": "Low",
        "color": "#666666"
    },
    "severity": {
        "id": 4,
        "name": "Important",
        "color": "#FFA500"
    },
    "id": 95,
    "is_blocked": false,
    "blocked_note": "",
    "ref": 75,
    "created_date": "2016-04-12T12:48:12+0000",
    "modified_date": "2016-04-12T12:49:13+0000",
    "finished_date": "2016-04-12T12:49:13+0000",
    "subject": "Test issue 3",
    "description": "Test issue description",
    "external_reference": null
},
"type": "issue",
"action": "delete",
"date": "2016-04-12T12:50:23.488Z",

```

```

"by": {
  "id": 6,
  "permalink": "http://localhost:9001/profile/user1",
  "username": "user1",
  "full_name": "Purificacion Montero",
  "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
  "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
}
}

```

### 4.5.3. Change

```

{
  "change": {
    "diff": {
      "status": {
        "to": "Ready for test",
        "from": "New"
      }
    },
    "comment": "",
    "comment_html": "",
    "delete_comment_date": null
  },
  "data": {
    "custom_attributes_values": {},
    "watchers": [],
    "permalink": "http://localhost:9001/project/project-0/issue/75",
    "tags": [
      "officia",
      "delectus"
    ],
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "milestone": null,
    "owner": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "assigned_to": null,
    "status": {
      "id": 3,

```

```

        "name": "Ready for test",
        "slug": "ready-for-test",
        "color": "#88A65E",
        "is_closed": true
    },
    "type": {
        "id": 1,
        "name": "Bug",
        "color": "#89BAB4"
    },
    "priority": {
        "id": 1,
        "name": "Low",
        "color": "#666666"
    },
    "severity": {
        "id": 4,
        "name": "Important",
        "color": "#FFA500"
    },
    "id": 95,
    "is_blocked": false,
    "blocked_note": "",
    "ref": 75,
    "created_date": "2016-04-12T12:48:12+0000",
    "modified_date": "2016-04-12T12:49:13+0000",
    "finished_date": "2016-04-12T12:49:13+0000",
    "subject": "Test issue 3",
    "description": "Test issue description",
    "external_reference": null
},
"by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
},
"type": "issue",
"action": "change",
"date": "2016-04-12T12:49:13.188Z"
}

```

## 4.6. Wiki page data information

### 4.6.1. Create

```

{
  "data": {
    "permalink": "http://localhost:9001/project/project-0/wiki/test-wiki-page",
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "owner": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "last_modifier": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "id": 6,
    "slug": "test-wiki-page",
    "content": "this is a test content",
    "created_date": "2016-04-12T12:29:32+0000",
    "modified_date": "2016-04-12T12:29:32+0000"
  },
  "type": "wikipage",
  "action": "create",
  "date": "2016-04-12T12:29:32.535Z",
  "by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
  }
}

```

## 4.6.2. Delete

```

{
  "data": {
    "permalink": "http://localhost:9001/project/project-0/wiki/test-wiki-page",
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    "owner": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "last_modifier": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    "id": 6,
    "slug": "test-wiki-page",
    "content": "This is other test content",
    "created_date": "2016-04-12T12:29:32+0000",
    "modified_date": "2016-04-12T12:30:29+0000"
  },
  "type": "wikipage",
  "action": "delete",
  "date": "2016-04-12T12:31:19.281Z",
  "by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
  }
}

```

### 4.6.3. Change

```

{
  "change": {
    "diff": {

```

```

    "content_html": {
      "to": "<p>This is other test content</p>",
      "from": "<p>this is a test content</p>"
    },
    "content_diff": {
      "to": "<del style=\"background:#ffe6e6;\">t</del><ins style=\"background:#e6ffe6;\">T</ins><span>his is </span><del style=\"background:#ffe6e6;\">a</del><ins style=\"background:#e6ffe6;\">other</ins><span> test content</span>",
      "from": null
    },
    },
    "comment": "",
    "comment_html": "",
    "delete_comment_date": null
  },
  "data": {
    "permalink": "http://localhost:9001/project/project-0/wiki/test-wiki-page",
    "project": {
      "id": 1,
      "permalink": "http://localhost:9001/project/project-0",
      "name": "Project Example 0",
      "logo_big_url": null
    },
    },
    "owner": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    },
    "last_modifier": {
      "id": 6,
      "permalink": "http://localhost:9001/profile/user1",
      "username": "user1",
      "full_name": "Purificacion Montero",
      "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",
      "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"
    },
    },
    "id": 6,
    "slug": "test-wiki-page",
    "content": "This is other test content",
    "created_date": "2016-04-12T12:29:32+0000",
    "modified_date": "2016-04-12T12:30:29+0000"
  },
  "by": {
    "id": 6,
    "permalink": "http://localhost:9001/profile/user1",
    "username": "user1",
    "full_name": "Purificacion Montero",

```



```
    "photo": "//media.taiga.io/avatar.80x80_q85_crop.png",  
    "gravatar_id": "464bb6d514c3ecece1b87136ceeda1da"  
  },  
  "type": "wikipage",  
  "action": "change",  
  "date": "2016-04-12T12:30:29.870Z"  
}
```