**1.** **GET ALL WORKFLOWS**

o **Purpose:**

Get all workflows

o **Method:**

GET

o **URL:**

/workflow/getAllWorkflows/json

o **Semantics:**

N/A

o **Sample Usages:**

· **Sample Json Request:**

/workflow/getAllWorkflows/json

· **Sample Json Result:**

[{"id":1,"author":"zhongchuan","authorId":1,"name":"123","purpose":"123","input":"123","output":"123","popularity":0,"image":…],"contributors":"1","linksInstructions":"1","createTime":"Nov 18, 2015 3:56:58 PM","versionNo":"1","isQuestion":0,"answerId":0,"userSet":[{"id":1,"userName":"admin","firstName":"admin","lastName":"user"}],"climateServiceSet":[{"id":1,"rootServiceId":2,"user":{"id":1,"userName":"admin","firstName":"admin","lastName":"user"},"name":"2-D-Variable-Map","purpose":"This service generates a map of a 2-dimensional variable with time averaging and spatial subsetting. Select a data source (model or observation), a variable name, a time range, and a spatial range (lat-lon box) below.","url":"twoDimMap.html","scenario":"12","createTime":"Mar 5, 2015 12:32:29 PM","versionNo":"1"}]},{"id":2,"author":"zhongchuan","authorId":1,"name":"test2","purpose":"test","input":"123","output":"321","popularity":0,"image":…

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**2.** **GET A PAGE OF WORKFLOWS**

o **Purpose:**

Get a page of workflows

o **Method:**

GET

o **URL:**

/workflow/getPageWorkflows/json

o **Semantics:**

N/A

o **Sample Usages:**

· **Sample Json Request:**

/workflow/getPageWorkflows/json

· **Sample Json Result:**

[{"id":1,"author":"zhongchuan","authorId":1,"name":"123","purpose":"123","input":"123","output":"123","popularity":0,"image":…],"contributors":"1","linksInstructions":"1","createTime":"Nov 18, 2015 3:56:58 PM","versionNo":"1","isQuestion":0,"answerId":0,"userSet":[{"id":1,"userName":"admin","firstName":"admin","lastName":"user"}],"climateServiceSet":[{"id":1,"rootServiceId":2,"user":{"id":1,"userName":"admin","firstName":"admin","lastName":"user"},"name":"2-D-Variable-Map","purpose":"This service generates a map of a 2-dimensional variable with time averaging and spatial subsetting. Select a data source (model or observation), a variable name, a time range, and a spatial range (lat-lon box) below.","url":"twoDimMap.html","scenario":"12","createTime":"Mar 5, 2015 12:32:29 PM","versionNo":"1"}]},{"id":2,"author":"zhongchuan","authorId":1,"name":"test2","purpose":"test","input":"123","output":"321","popularity":0,"image":…

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**3.** **GET WORKFLOW BY ID**

o **Purpose:**

Get workflow by id

o **Method:**

GET

o **URL:**

/workflow/getOneWorkflow/id/:id

o **Semantics:**

Id: workflow id to get

o **Sample Usages:**

· **Sample Json Request:**

/workflow/getOneWorkflow/id/1

· **Sample Json Result:**

{"id":1,"author":"zhongchuan","authorId":1,"name":"123","purpose":"123","input":"123","output":"123","popularity":2,"image":…,"contributors":"1","linksInstructions":"1","createTime":"Nov 18, 2015 3:56:58 PM","versionNo":"1","isQuestion":0,"answerId":0,"userSet":[{"id":1,"userName":"admin","firstName":"admin","lastName":"user"}],"climateServiceSet":[{"id":1,"rootServiceId":2,"user":{"id":1,"userName":"admin","firstName":"admin","lastName":"user"},"name":"2-D-Variable-Map","purpose":"This service generates a map of a 2-dimensional variable with time averaging and spatial subsetting. Select a data source (model or observation), a variable name, a time range, and a spatial range (lat-lon box) below.","url":"twoDimMap.html","scenario":"12","createTime":"Mar 5, 2015 12:32:29 PM","versionNo":"1"}]}

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**4.** **GET WORKFLOW BY Author ID**

o **Purpose:**

Get workflow by author id

o **Method:**

GET

o **URL:**

/workflow/getWorkflowByAuthorId/:id

o **Semantics:**

Id: author id to get

o **Sample Usages:**

· **Sample Json Request:**

/workflow/getWorkflowByAuthorId/1

· **Sample Json Result:**

· [{"id":1,"author":"zhongchuan","authorId":1,"name":"123","purpose":"123","input":"123","output":"123","popularity":3,"image":…,,"contributors":"1","linksInstructions":"1","createTime":"Nov 18, 2015 3:56:58 PM","versionNo":"1","isQuestion":0,"answerId":0,"userSet":[{"id":1,"userName":"admin","firstName":"admin","lastName":"user"}],"climateServiceSet":[{"id":1,"rootServiceId":2,"user":{"id":1,"userName":"admin","firstName":"admin","lastName":"user"},"name":"2-D-Variable-Map","purpose":"This service generates a map of a 2-dimensional variable with time averaging and spatial subsetting. Select a data source (model or observation), a variable name, a time range, and a spatial range (lat-lon box) below.","url":"twoDimMap.html","scenario":"12","createTime":"Mar 5, 2015 12:32:29 PM","versionNo":"1"}]},{"id":2,"author":"zhongchuan","authorId":1,"name":"test2","purpose":"test","input":"123","output":"321","popularity":0,"image":…,,"contributors":"123","linksInstructions":"123","createTime":"Nov 19, 2015 7:26:35 PM","versionNo":"1","dataset":"1","otherWorkflows":"1","isQuestion":0,"answerId":0,"userSet":[{"id":1,"userName":"admin","firstName":"admin","lastName":"user"}],"climateServiceSet":[{"id":1,"rootServiceId":2,"user":{"id":1,"userName":"admin","firstName":"admin","lastName":"user"},"name":"2-D-Variable-Map","purpose":"This service generates a map of a 2-dimensional variable with time averaging and spatial subsetting. Select a data source (model or observation), a variable name, a time range, and a spatial range (lat-lon box) below.","url":"twoDimMap.html","scenario":"12","createTime":"Mar 5, 2015 12:32:29 PM","versionNo":"1"}]}]

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**5.** **GET WORKFLOW ENTRY NUMBER**

o **Purpose:**

Get workflow entry number

o **Method:**

GET

o **URL:**

/workflow/getNumEntry

o **Semantics:**

N/A

o **Sample Usages:**

· **Sample Json Request:**

/workflow/getNumEntry

· **Sample Json Result:**

{"numEntry":2}

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**6.** **ADD NEW WORKFLOW**

o **Purpose:**

Add new work flow

o **Method:**

POST

o **URL:**

/workflow/newWorkflow

o **Semantics:**

N/A

o **Sample Usages:**

· **Sample Json Request:**

/workflow/newWorkflow

· **Sample Json Result:**

N/A

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**7.** **DELETE A WORKFLOW**

o **Purpose:**

Delete a workflow

o **Method:**

DELETE

o **URL:**

/workflow/deleteWorkflow/id/:id

o **Semantics:**

Id : workflow id to delete

o **Sample Usages:**

· **Sample Json Request:**

/workflow/deleteWorkflow/id/1

· **Sample Json Result:**

N/A

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**8.** **MARK AN COMMENT AS ANSWER**

o **Purpose:**

Mark a comment as answer

o **Method:**

POST

o **URL:**

/workflow/markAnswer

o **Semantics:**

N/A

o **Sample Usages:**

· **Sample Json Request:**

/workflow/markAnswer

· **Sample Json Result:**

N/A

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**9.** **GET POPULAR WORKFLOWS**

o **Purpose:**

Get most popular workflows

o **Method:**

GET

o **URL:**

/workflow/getPopularWorkflows/json

o **Semantics:**

N/A

o **Sample Usages:**

· **Sample Json Request:**

/workflow/getPopularWorkflows/json

· **Sample Json Result:**

· [{"id":1,"author":"zhongchuan","authorId":1,"name":"123","purpose":"123","input":"123","output":"123","popularity":3,"image":…,,"contributors":"1","linksInstructions":"1","createTime":"Nov 18, 2015 3:56:58 PM","versionNo":"1","isQuestion":0,"answerId":0,"userSet":[{"id":1,"userName":"admin","firstName":"admin","lastName":"user"}],"climateServiceSet":[{"id":1,"rootServiceId":2,"user":{"id":1,"userName":"admin","firstName":"admin","lastName":"user"},"name":"2-D-Variable-Map","purpose":"This service generates a map of a 2-dimensional variable with time averaging and spatial subsetting. Select a data source (model or observation), a variable name, a time range, and a spatial range (lat-lon box) below.","url":"twoDimMap.html","scenario":"12","createTime":"Mar 5, 2015 12:32:29 PM","versionNo":"1"}]},{"id":2,"author":"zhongchuan","authorId":1,"name":"test2","purpose":"test","input":"123","output":"321","popularity":0,"image":…,,"contributors":"123","linksInstructions":"123","createTime":"Nov 19, 2015 7:26:35 PM","versionNo":"1","dataset":"1","otherWorkflows":"1","isQuestion":0,"answerId":0,"userSet":[{"id":1,"userName":"admin","firstName":"admin","lastName":"user"}],"climateServiceSet":[{"id":1,"rootServiceId":2,"user":{"id":1,"userName":"admin","firstName":"admin","lastName":"user"},"name":"2-D-Variable-Map","purpose":"This service generates a map of a 2-dimensional variable with time averaging and spatial subsetting. Select a data source (model or observation), a variable name, a time range, and a spatial range (lat-lon box) below.","url":"twoDimMap.html","scenario":"12","createTime":"Mar 5, 2015 12:32:29 PM","versionNo":"1"}]}]

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**10.** **ADD A COMMENT**

o **Purpose:**

Add a comment to workflow

o **Method:**

POST

o **URL:**

/comment/add

o **Semantics:**

N/A

o **Sample Usages:**

· **Sample Json Request:**

/comment/add

· **Sample Json Result:**

N/A

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**11.** **GET COMMENT BY WORKFLOW ID**

o **Purpose:**

Get Comments by workflow ID

o **Method:**

GET

o **URL:**

/comment/getbyworkflowid/:id

o **Semantics:**

Id : workflow id to get comment

o **Sample Usages:**

· **Sample Json Request:**

/comment/getbyworkflowid/1

· **Sample Json Result:**

[{"id":1,"username":"Wenjie Ma","userid":111,"replytoid":111,"replytoname":"Wenjie Ma","workflowid":3,"comment":"1234","date":"Dec 17, 2015 8:15:03 PM"}]

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**12.** **GET All Groups by group id**

o **Purpose:**

Get all the group information by group ids

o **Method:**

GET

o **URL:**

/group/getAllGroups/json

o **Semantics:**

NA

o **Sample Usages:**

· **Sample Json Request:**

/group/getAllGroups/json

· **Sample Json Result:**

[{"id":1,"author":"Xuehong Zheng","authorId":1,"groupName":”aaa”}, {"id":2,"author":"Xuehong Zheng","authorId":1,"groupName":”bbb”}]

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**13.** **Create New User Group**

o **Purpose:**

Create a new user group

o **Method:**

GET

o **URL:**

/group/createNewGroup/name/:groupName/creatorId/:id

o **Semantics:**

name: group name

id: creater id

o **Sample Usages:**

· **Sample Json Request:**

/group/createNewGroup/name/group0/creatorId/1

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**14.** **Add New Admin to User Group**

o **Purpose:**

Add a new Admin to the user group

o **Method:**

GET

o **URL:**

/group/addAdminToGroup/groupId/:groupId/userId/:userId

o **Semantics:**

groupId: the id of the user group

userId: the id of the user to be admin

o **Sample Usages:**

· **Sample Json Request:**

/group/addAdminToGroup/groupId/1/userId/3

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**15.** **Add New User Member to User Group**

o **Purpose:**

Add a new member to the user group

o **Method:**

GET

o **URL:**

/group/addMemberToGroup/groupId/:groupId/userId/:userId

o **Semantics:**

groupId: the id of the user group

userId: the id of the user to be member

o **Sample Usages:**

· **Sample Json Request:**

/group/addMemberToGroup/groupId/1/userId/4

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**16.** **Get User Group by ID**

o **Purpose:**

Get the data of one user group by ID

o **Method:**

GET

o **URL:**

/group/getOneGroup/id/:id

o **Semantics:**

id: the id of the group

o **Sample Usages:**

· **Sample Json Request:**

/group/getOneGroup/id/1

· **Sample Json Respond:**

{"id":1,"author":"Xuehong Zheng","authorId":1,"groupName":”aaa”}

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**17.** **Add New Subscription**

o **Purpose:**

Add to a new subscription

o **Method:**

POST

o **URL:**

/subscription/addNewSubscription

o **Semantics:**

As a POST method, the API cannot be directly executed through a web browser. Instead, it may be executed through Rails, JQuery, Python, BASH, etc.

o **Sample Usages:**

· **Sample Json Request:**

/subscription/addNewSubscription

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**18.** **Get Subscription By User ID**

o **Purpose:**

Get the subscription by user id.

o **Method:**

GET

o **URL:**

/subscription/getSubscriptionByUserID/id/:id/target/:targetClass

o **Sample Usages:**

· **Sample Json Request:**

/subscription/getSubscriptionByUserID/id/1/target/aaa

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**19.** **Get Subscription By Target Class**

o **Purpose:**

Get the subscription by target class.

o **Method:**

GET

o **URL:**

/subscription/getSubscriptionByTargetID/targetid/:id/target/:targetClass

o **Sample Usages:**

· **Sample Json Request:**

/subscription/getSubscriptionByTargetID/targetid/1/target/aaa

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.

**20.** **Subscribe to User**

o **Purpose:**

Subscribe a user.

o **Method:**

GET

o **URL:**

/subscription/subscribeToUser/id/:id/target/:target

o **Sample Usages:**

· **Sample Json Request:**

/subscription/subscribeToUser/id/4/target/aaa

· **Result:**

HTTP 200 if returned successfully, HTTP 404 if not found.