**How to ECS REST Services**

**06/09/2014**

**Getting Exercise Events**

**Summary**: The following REST call on the EnvironmentConfigurationServices (ECS) VirtualConfigurationServices REST API will return a list of exercises in the **SystemConfig** Mongo database. For our MSCO-CF applications a database is created for each exercise in Mongo and all collections associated with the exercise are maintained within that exercise database.

**Note:**

**Jared on the calls that take the ID, in the new implementation that Josh will implement after today, you would just use the mongo ID. If you are testing his first conversion based on the nm.php, you will have to take the ID that was on the back of the URL and pass that back in as the ID. (I know this sounds confusing and bad, that is why we want to clean it up)**

**REST Call(s):**

GET:

<http://host/ecs/Exercises>

**Example JSON returned:**

Example GET Call:

<http://host/ecs/Exercise>

[

{

"\_id": "53ad735ac95acbe03c97719a",

"name": "DisasterRelief",

"command": "SSCPAC",

"description": "updated description",

"poc": "Mr. James Boerke ",

"startTime": "7/1/2014",

"stopTime": "7/31/2014",

"vmWorkingStatus": {

"status": "open",

"percentComplete": "50%",

"statusDescription": "building"

},

"filepath": "/my/path",

"time": "2014-06-27 08:41:47"

},

{

"\_id": "53ad73981848fde23c92ade9",

"name": "PersonnelRecovery",

"command": "SSCPAC",

"description": "DisasterRelief exercise in Gulf",

"poc": {

"name": "Jared Ladner",

"email": "jared.ladner@geoent.com",

"phone": "228-688-1265"

},

"startTime": "7/1/2014",

"stopTime": "7/31/2014",

"vmWorkingStatus": "currentStage",

"filepath": "/my/path",

"time": "2014-06-30 22:28:25"

},

{

"\_id": "53b22afc1dc9b02412bde983",

"name": "myTESTExercise",

"command": "SSCPAC",

"description": "DisasterRelief exercise in Gulf",

"poc": {

"name": "Jared Ladner",

"email": "jared.ladner@geoent.com",

"phone": "228-688-1265"

},

"startTime": "7/1/2014",

"stopTime": "7/31/2014",

"vmWorkingStatus": "currentStage",

"filepath": "/my/path",

"time": "2014-06-30 22:29:00"

}

]

POST:

<http://host/ecs/Exercises>

**Example JSON returned:**

Example POST Call:

<http://host/ecs/Exercises>

{

"name": "DisasterRelief",

"command": "SSCPAC",

"description": "DisasterRelief exercise in Gulf",

"poc":

{

"name": "Jared Ladner",

"email": "jared.ladner@geoent.com",

"phone": "228-688-1265"

},

"startTime": "7/1/2014",

"stopTime": "7/31/2014",

"vmWorkingStatus": "currentStage",

"filepath": "/my/path"

}

**Note: name cannot have spaces and is limited to 64 characters**

**Example JSON returned:**

PUT: Example Call:

<http://host/ecs/Exercises/id>

{

"name": "DisasterRelief",

"command": "SSCPAC",

"description": "DisasterRelief exercise in Gulf",

"poc":

{

"name": "Jared Ladner",

"email": "jared.ladner@geoent.com",

"phone": "228-688-1265"

},

"startTime": "7/1/2014",

"stopTime": "7/31/2014",

"vmWorkingStatus": "currentStage",

"filepath": "/my/path"

}

DELETE:

<http://host/ecs/Exercises/id>

**Getting Virtual Machines for an Exercise**

**Summary**: The following REST call is called when a list of virtual machines is required for a given exercise.

**REST Call(s):**

GET:

http://msco-vmf.sd.spawar.navy.mil/TrngEventVirtualSystems/*{exercise}*

**Example JSON returned:**

Example GET Call:

<http://msco-vmf.sd.spawar.navy.mil/TrngEventVirtualSystems/DisasterRelief-EX1>

{

"\_collectiondata": [

{

"name": "DisasterRelief\_JSAF",

"system\_name": "JSAF",

"description": "JSAF VM Disaster Relief scenario",

"version": "4.6.0.4",

"unique\_cloud\_vm\_id": "MSCO-Test<0xdelimit>msco-esxi3.sd.spawar.navy.mil<0xdelimit>DisasterRelief\_JSAF",

"VLAN": "21",

"properties": "",

"deployment\_status": "deployed",

"url": "http://msco-db.sd.spawar.navy.mil/nm.php/DisasterRelief-EX1/TrngEventVirtualSystems/1397087512825",

"time": "2014-04-09 17:52:39"

},

{

"name": "JBUS",

"system\_name": "JBUS",

"description": "Joint Simulation Bus",

"version": "4.3",

"unique\_cloud\_vm\_id": "MSCO-Test<0xdelimit>msco-esxi3.sd.spawar.navy.mil<0xdelimit>JBUS",

"VLAN": "21",

"properties": "",

"deployment\_status": "deployed",

"url": "http://msco-db.sd.spawar.navy.mil/nm.php/DisasterRelief-EX1/TrngEventVirtualSystems/1397249006475",

"time": "2014-04-11 13:43:26"

},

{

"name": "DisasterRelief-EX1\_JSAF-0",

"system\_name": "JSAF",

"description": "Sim",

"version": "1.0",

"unique\_cloud\_vm\_id": "",

"VLAN": "21",

"template\_uri": "C:\\OVFs\\DisasterRelief\_JSAF.ovf",

"properties": "",

"deployment\_status": "undeployed",

"url": "http://msco-db.sd.spawar.navy.mil/nm.php/DisasterRelief-EX1/TrngEventVirtualSystems/1399311670112",

"time": "2014-05-05 10:41:10"

}

]

}

**Getting a Virtual Machines Status**

**Summary**: The following REST call to the Virtual Manager Framework is required to return the current status of the virtual machine identified by unique identifier.

**REST Call(s):**

http://msco-vmf/VirtualizationManager/user/virtualMachine*{unique-id}*

**Example JSON returned:**

Example GET Call:

[http://msco-vmf/VirtualizationManager/user/virtualMachine/MSCO-Test<0xdelimit>msco-esxi3.sd.spawar.navy.mil<0xdelimit>DisasterRelief\_JSAF](http://msco-vmf/VirtualizationManager/user/virtualMachine/MSCO-Test%3c0xdelimit%3emsco-esxi3.sd.spawar.navy.mil%3c0xdelimit%3eDisasterRelief_JSAF)

[

{

"id": "MSCO-Test<0xdelimit>msco-esxi3.sd.spawar.navy.mil<0xdelimit>DisasterRelief\_JSAF",

"name": "DisasterRelief\_JSAF",

"cpu": 2,

"ram": 3072,

"running\_status": "POWERED\_ON",

"public\_ip": "128.49.67.193",

"info": "TOOLS\_OK"

}

]

## FVE Examples:

**Process information**

**REST Call(s):**

* **/ecs/fve/DeploymentSummaries**
* **/ecs/fve/Processes**
* **/ecs/fve/Process/:exercise**
* **/ecs/fve/ProcessSummary/:exercise**

GET:

<http://localhost:8081/ecs/fve/Processes>

<http://localhost:8081/ecs/fve/DeploymentSummaries>

<http://localhost:8081/ecs/fve/Process/J6.JMT.PersonnelRecovery:J6_Personnel_Recovery:1.0>

**Example JSON returned:**

Example GET Call:

<http://localhost:8081/ecs/fve/Processes>

[

{

"id": "J6PersonnelRecovery.PersonnelRecovery",

"name": "PersonnelRecovery",

"version": "1.0",

"packageName": "fake-packageName",

"type": "fake-type",

"knowledgeType": "PROCESS",

"namespace": "fake-namespace",

"originalPath": null,

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.0",

"encodedProcessSource": null

},

{

"id": "J6PersonnelRecovery.3.3.2DetermineMethodofCommunicationtoIsolatedPersonnel",

"name": "DetermineMethodofCommunicationtoIsolatedPersonnel",

"version": "1.0",

"packageName": "fake-packageName",

"type": "fake-type",

"knowledgeType": "PROCESS",

"namespace": "fake-namespace",

"originalPath": null,

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.0",

"encodedProcessSource": null

},

{

"id": "J6PersonnelRecovery.3.2.1ReceiveIsolatedPersonnelInitiatedNotification",

"name": "ReceiveIsolatedPersonelInitiateNotification",

"version": "1.0",

"packageName": "fake-packageName",

"type": "fake-type",

"knowledgeType": "PROCESS",

"namespace": "fake-namespace",

"originalPath": null,

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.0",

"encodedProcessSource": null

},

{

"id": "J6PersonnelRecovery.3.3.1DetermineMethodofNotification",

"name": "DetermineMethodofNotification",

"version": "1.0",

"packageName": "fake-packageName",

"type": "fake-type",

"knowledgeType": "PROCESS",

"namespace": "fake-namespace",

"originalPath": null,

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.0",

"encodedProcessSource": null

}

]

<http://localhost:8081/ecs/fve/DeploymentSummaries>

[

{

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.0",

"projectClassification": null,

"sponsorOrganization": "null",

"pocName": "null",

"pocEmail": "null",

"pocOrganization": "null",

"pocAssociation": "null",

"approvalStatus": "null",

"approvedBy": "null",

"approvalDate": "null",

"versionStatus": "null",

"versionNumber": "null",

"versionDate": "null"

}

]

<http://localhost:8081/ecs/fve/Process/J6.JMT.PersonnelRecovery:J6_Personnel_Recovery:1.0>

[

{

"id": "J6PersonnelRecovery.PersonnelRecovery",

"name": "PersonnelRecovery",

"version": "1.0",

"packageName": "fake-packageName",

"type": "fake-type",

"knowledgeType": "PROCESS",

"namespace": "fake-namespace",

"originalPath": null,

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.0",

"encodedProcessSource": null

},

{

"id": "J6PersonnelRecovery.3.3.2DetermineMethodofCommunicationtoIsolatedPersonnel",

"name": "DetermineMethodofCommunicationtoIsolatedPersonnel",

"version": "1.0",

"packageName": "fake-packageName",

"type": "fake-type",

"knowledgeType": "PROCESS",

"namespace": "fake-namespace",

"originalPath": null,

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.0",

"encodedProcessSource": null

},

{

"id": "J6PersonnelRecovery.3.2.1ReceiveIsolatedPersonnelInitiatedNotification",

"name": "ReceiveIsolatedPersonelInitiateNotification",

"version": "1.0",

"packageName": "fake-packageName",

"type": "fake-type",

"knowledgeType": "PROCESS",

"namespace": "fake-namespace",

"originalPath": null,

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.0",

"encodedProcessSource": null

},

{

"id": "J6PersonnelRecovery.3.3.1DetermineMethodofNotification",

"name": "DetermineMethodofNotification",

"version": "1.0",

"packageName": "fake-packageName",

"type": "fake-type",

"knowledgeType": "PROCESS",

"namespace": "fake-namespace",

"originalPath": null,

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.0",

"encodedProcessSource": null

}

]

**Exercise Database API**

The parameter “:exercise” is the actual name of the Exercise not the ObjectID.

All other parameters that end in “:\*Id” are the actual ObjectId of the document.

**REST Call(s):**

**GET METHODS=================================**

* **/ecs/fve/Missions/:exercise**
* **/ecs/fve/Missions/:exercise/:missionId**
* **/ecs/fve/Mets/:exercise**
* **/ecs/fve/Mets/:exercise/:metsId**
* **/ecs/fve/MissionProducts/:exercise**
* **/ecs/fve/MissionProducts/:exercise/:missionProductId**
* **/ecs/fve/MissionMetrics/:exercise**
* **/ecs/fve/MissionMetrics/:exercise/:missionMetricId**
* **/ecs/fve/RoleAssignments/:exercise**
* **/ecs/fve/RoleAssignments/:exercise/:roleAssignmentId**
* **/ecs/fve/Users/:exercise**
* **/ecs/fve/Users/:exercise/:userId**
* **/ecs/fve/ProcessInstances/:exercise**
* **/ecs/fve/ProcessInstances/:exercise/:processInstanceId**
* **/ecs/fve/InstanceRoles/:exercise**
* **/ecs/fve/InstanceRoles/:exercise/:instanceRoleId**
* **/ecs/fve/InstanceTasks/:exercise**
* **/ecs/fve/InstanceTasks/:exercise/:instanceTaskId**
* **/ecs/fve/InstanceVariables/:exercise**
* **/ecs/fve/InstanceVariables/:exercise/:instanceVariableId**

**POST METHODS=================================**

* **/ecs/fve/Missions/:exercise**
* **/ecs/fve/Mets/:exercise**
* **/ecs/fve/MissionProducts/:exercise**
* **/ecs/fve/MissionMetrics/:exercise**
* **/ecs/fve/RoleAssignments/:exercise**
* **/ecs/fve/Users/:exercise**
* **/ecs/fve/ProcessInstances/:exercise**
* **/ecs/fve/InstanceRoles/:exercise**
* **/ecs/fve/InstanceTasks/:exercise**
* **/ecs/fve/InstanceVariables/:exercise**

**PUT METHODS=================================**

* **/ecs/fve/Missions/:exercise/:missionId**
* **/ecs/fve/Mets/:exercise/:metId**
* **/ecs/fve/MissionProducts/:exercise/:missionProductId**
* **/ecs/fve/MissionMetrics/:exercise/:missionMetricId**
* **/ecs/fve/RoleAssignments/:exercise/:roleAssignmentId**
* **/ecs/fve/Users/:exercise/:userId**
* **/ecs/fve/ProcessInstances/:exercise/:processInstanceId**
* **/ecs/fve/InstanceRoles/:exercise/:instanceRoleId**
* **/ecs/fve/InstanceTasks/:exercise/:instanceTaskId**
* **/ecs/fve/InstanceVariables/:exercise/:instanceVariableId**

**DELETE METHODS=================================**

* **/ecs/fve/Missions/:exercise/:missionId**
* **/ecs/fve/Mets/:exercise/:metId**
* **/ecs/fve/MissionProducts/:exercise/:missionProductId**
* **/ecs/fve/MissionMetrics/:exercise/:missionMetricId**
* **/ecs/fve/RoleAssignments/:exercise/:roleAssignmentId**
* **/ecs/fve/Users/:exercise/:userId**
* **/ecs/fve/ProcessInstances/:exercise/:processInstanceId**
* **/ecs/fve/InstanceRoles/:exercise/:instanceRoleId**
* **/ecs/fve/InstanceTasks/:exercise/:instanceTaskId**
* **/ecs/fve/InstanceVariables/:exercise/:instanceVariableId**

**Exercise Schema Examples**

Missions

[

{

"name": "Receive Isolated Personel Initiate Notification",

"processName": "ReceiveIsolatedPersonelInitiateNotification",

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.1",

"processId": "J6PersonnelRecovery.3.2.1ReceiveIsolatedPersonnelInitiatedNotification"

},

{

"name": "Determine Method of Notification",

"processName": "DetermineMethodofNotification",

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.1",

"processId": "J6PersonnelRecovery.3.3.1DetermineMethodofNotification"

},

{

"name": "Determine Method of Communication to Isolated Personnel",

"processName": "DetermineMethodofCommunicationtoIsolatedPersonnel",

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.1",

"processId": "J6PersonnelRecovery.3.3.2DetermineMethodofCommunicationtoIsolatedPersonnel"

},

{

"name": "Personnel Recovery",

"processName": "PersonnelRecovery",

"deploymentId": "J6.JMT.PersonnelRecovery:J6\_Personnel\_Recovery:1.1",

"processId": "J6PersonnelRecovery.PersonnelRecovery"

}

]

METS

{

"number": "0001",

"name": "Met 1",

"description": "description text goes here",

"measures": [

{

"measureText": "Measure 1",

"number": "0001"

},

{

"measureText": "Measure 2",

"number": "0002"

},

{

"measureText": "Measure 3",

"number": "0002"

}

],

"isUsed": true

}

MissionsProducts

{

"missionId": "53ad7a512ec778e13ce6ed58",

"name": "my work product 2",

"description": "my work product 2",

"role": "Model",

"taskName": "task2",

"inputOutput": "input",

"assignment": "Simulated Role",

"path": "my/path"

}

MissionMetrics

{

"metId": "53ad7a512ec778e13ce6ed58",

"missionId": "53ad7a512ec778e13ce6ed58",

"metrics": [

{

"number": "M1",

"measureText": "Measure 1 text",

"value": "measure 1 value",

"comment": "comment 1"

},

{

"number": "M2",

"measureText": "Measure 2 text",

"value": "measure 2 value",

"comment": "comment 2"

}

]

}

RoleAssignments

{

"role": "your role value",

"assignment": "Training Audience"

}

Users

{

"ldapId": "jladner",

"info":

{

"name": "Jared Ladner",

"email": "jared.ladner@geoent.com",

"phone": "228-688-1265"

},

"role": "unknown",

"group": "Planner"

}

ProcessInstances

{

"missionId": "53ad7a512ec778e13ce6ed58",

"pesInstanceId": "jBPM.ProcessInstance.ID",

"name": "ProcessInstance Name",

"state": "active",

"startTime": "7/1/2014",

"stopTime": "7/2/2014"

}

InstanceRoles

{

"processInstanceId": "53ad8f722ec778e13ce6ed69",

"roleAssignmentId": "53ad89ba2ec778e13ce6ed61",

"userId": "53ad8a8d2ec778e13ce6ed62"

}

InstanceTasks

{

"processInstanceId": "53ad8f722ec778e13ce6ed69",

"pesTaskId": "pesID",

"name": "My Instance Task Name",

"role": "some role not restricted",

"user": "some user no relationships",

"state": "some state",

"startTime": "7/1/2014",

"stopTime": "7/1/2014",

"info": [

{

"name": "My Instance Task Name",

"description": "My Instance Task Name",

"inputOutput": "input"

}

]

}

InstanceVariables

{

"processInstanceId": "53ad8f722ec778e13ce6ed69",

"name": "My Instance Task Name",

"value": "some role not restricted"

}

**Other GET Methods**

GET: By Document Object ID

[http://localhost:8081/ecs/fve/Missions/:exercise/:missionId](http://localhost:8081/ecs/fve/Missions/:id/:missionId)

<http://localhost:8081/ecs/fve/Missions/PersonnelRecovery/53a45fe94d20240000b53a4b>

:exercise == your exercise name

:missionId == is the primary ObjectId of the Document

{

"\_id": "53a45fe94d20240000b53a4b",

"processModelId": [

{

"name": "myProcess1",

"deploymentId": "deployment1",

"processId": "process1"

},

{

"name": "myProcess2",

"deploymentId": "deployment2",

"processId": "process2"

}

],

"name": "Mission 1",

"time": "2014-06-17 21:22:05"

}

GET: With a search query

<http://localhost:8081/ecs/fve/Mets/:exercise/:metId?query1=value1&query2=value2>

<http://localhost:8081/ecs/fve/Mets/PersonnelRecovery?number=0002>

GET: With a search query for embedded document

<http://localhost:8081/ecs/fve/Mets/PersonnelRecovery?measures.number=0004>

:exercise == your exercise name

{

"\_id": "53aaf2180516e0d70cd71422",

"number": "0002",

"name": "Met 2",

"description": "description text goes here",

"measures": [

{

"name": "Measure 4",

"number": "0004"

},

{

"name": "Measure 5",

"number": "0005"

},

{

"name": "Measure 6",

"number": "0006"

}

],

"time": "2014-06-25 11:01:13"

}

POST:

<http://localhost:8081/ecs/fve/MissionProducts/:exercise>

:exercise == your exercise name

\*The POST method can take a single document or an array of documents. Each document will be validated before posting the entire array.

SINGLE document json:

{

"name": "my model 1",

"processName": "myProcess1",

"deploymentId": "deployment1",

"processId": "process1"

}

ARRAY document json:

[

{

"name": "my model 1",

"processName": "myProcess1",

"deploymentId": "deployment1",

"processId": "process1"

},

{

"name": "my model 2",

"processName": "myProcess2",

"deploymentId": "deployment2",

"processId": "process2"

},

{

"name": "my model 3",

"processName": "myProcess3",

"deploymentId": "deployment3",

"processId": "process3"

}

]

PUT:

<http://localhost:8081/ecs/fve/MissionProducts/:exercise/:metId>

<http://localhost:8081/ecs/fve/MissionProducts/PersonnelRecovery/53aafc695cc106d60c69904b>

:exercise == your exercise name

:metId == object id for the Met

{

"missionId": "53ad7a512ec778e13ce6ed58",

"name": "**changed name of Mission Product**",

"description": "my work product 2",

"role": "Model",

"taskName": "task2",

"inputOutput": "input",

"assignment": "Simulated Role",

"path": "**/my/new/file/path** "

}

DELETE:

<http://localhost:8081/ecs/fve/MissionProducts/:exercise/:metId>

<http://localhost:8081/ecs/fve/MissionProducts/PersonnelRecovery/53aafc695cc106d60c69904b>

:exercise == your exercise name

:metId == object id for the Met