

Investigate Bios

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Before Investigating wsman and racadm, the tools need to be installed by the links

- 1) install racadm link: <http://linux.dell.com/repo/community/openmanage/>
- 2) install docker link: <https://docs.docker.com/engine/installation/linux/docker-ce/ubuntu/>
- 3) set up two smi service:

```
sudo docker run -p 0.0.0.0:46011:46011 --name dell-service-server-inventory -d rackhd/dell-server-inventory:latest
```

```
sudo docker run -p 0.0.0.0:46018:46018 --privileged --name dell-server-configuration-profile -d rackhd/dell-server-configuration-profile:latest
```

ps: 启workflow之前, 需要设置BMC

```
curl -k -X PUT -H 'Content-Type: application/json' -d '{ "nodeId": "59db1dc1423ad2cc0650f8bc", "service": "dell-wsman-obm-service", "config": { "user": "admin", "password": "admin", "host": "192.168.188.13" } }' localhost:8080/api/2.0/obms
```

Get the BIOS configuration - wsman				
Check Item	File	Action	Unit Test	Refine Point
Graph	on-taskgraph/lib/graphs/dell-wsman-get-bios-graph.js (Graph.Dell.Wsman.GetBios)		N/A	
Task	on-tasks/lib/task-data/tasks/dell-wsman-get-bios.js		N/A	
Base-task	on-tasks/lib/task-data/base-tasks/dell-wsman-bios.js		N/A	
Job	on-tasks/lib/jobs/dell-wsman-bios.js	Add unit test	Not ready	1
Schema		Add new schema	Not ready	1
Utils	on-tasks/lib/utils/job-utils/wsman-tool.js	Add unit test	Not ready	1
Service Required	service-server-inventory	N/A	N/A	
Catalog	Catalog type: bios, boot Data file: bios_wsman.json, boot_wsman.json	update or create the two type catalogs	N/A	

```
curl -X POST --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{
  "name": "Graph.Dell.Wsman.GetBios",
  "options": {
    "defaults": {}
  }
}' 'http://192.168.128.10:8080/api/2.0/nodes/59db1dc1423ad2cc0650f8bc/workflows'
```

Get the BIOS configuration - racadm				
Check Item	File	Action	Unit Test	Refine Point
Graph	on-taskgraph/lib/graphs/dell-racadm-get-bios-graph.js (Graph.Dell.Racadm.GetBIOS)			
Task	on-tasks/lib/task-data/tasks/dell-racadm-get-bios.js			
Base-task	on-tasks/lib/task-data/base-tasks/racadm-control-base.js			
Job	on-tasks/lib/jobs/racadm-control.js			
Schema	on-tasks/lib/task-data/dell-racadm-control.json			
Utils	on-tasks/lib/utils/job-utils/racadm-tool.js: getBiosConfig			
Service Required	N/A			
Catalog	Data file: racadm_bios.xml -> racadm_bios.json			

```
curl -X POST --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{
  "name": "Graph.Dell.Racadm.GetBIOS",
  "options": {
    "defaults": {
      "action": "getBiosConfig",
      "serverUsername": "",
      "serverPassword": "",
      "serverFilePath": "/tmp/tt.xml"
    }
  }
}' 'http://192.168.128.10:8080/api/2.0/nodes/59ca21d73a0bb58304df131d/workflows'
```

Set the BIOS configuration - wsman	task 1			
Check Item	File	Action	Unit Test	Refine Point
Graph	on-taskgraph/lib/graphs/dell-wsman-configure-bios-graph.js (Graph.Dell.Wsman.ConfigureBios)			
Task	on-tasks/lib/task-data/tasks/dell-wsman-configure-bios.js			
Base-task	on-tasks/lib/task-data/base-tasks/dell-wsman-configure-bios.js			
Job	on-tasks/lib/jobs/dell-wsman-configure-bios.js	configureBios refine&& add unit test	not ready	2
Schema	not ready	Add schema		1
Utils				
Service Required	service-dell-server-configuration-profile			
Catalog	N/A			
Bug(need to refine)	Smi service get request from task1 and create a new job. It doesn't wait the job finish and sends reponse to task1 which result in task 2 doesn't get the latest data			3

```
var data = {
  "serverRequest": {
    "serverIP": obm.config.host,
    "serverUsername": obm.config.user,
    "serverPassword": encryption.decrypt(obm.config.password),
  },
  "attributes": this.options.attributes, ({{"name":, "value":""}})
  "biosBootSequenceOrder": this.options.biosBootSequenceOrder,
  "hddSequenceOrder": this.options.hddSequenceOrder,
  "enableBootDevices": this.options.enableBootDevices,
  "disableBootDevices": this.options.disableBootDevices,
  "rebootJobType": this.options.rebootJobType, (取值1, 2, 3)
  "scheduledStartTime": this.options.scheduledStartTime, (20170928140000)
  "untilTime": this.options.untilTime (20170929140000)
};
```

Ps:

- 1) Task 1执行成功后执行task 2: 执行get Bios, 同table1
- 2) *Smi service并没有等task 1真正结束, 就去执行task 2, 导致出错*

```
curl -X POST --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{
  "name": "Graph.Dell.Wsman.ConfigureBios",
  "options": {
    "defaults": {
      "attributes": [
        {
          "name": "NumLock",
          "value": "On"
        }
      ],
      "biosBootSequenceOrder": [
        "string"
      ],
      "hddSequenceOrder": [
        "string"
      ],
      "enableBootDevices": [
        "true"
      ],
      "disableBootDevices": [
        "false"
      ],
      "rebootJobType": 1,
      "scheduledStartTime": "20170928065000",
      "untilTime": "20170929140000"
    }
  }
}' http://192.168.128.10:8080/api/2.0/nodes/59c9c683fc166030778c6937/workflows
```

Set the BIOS configuration - racadm				
Check Item	File	Action	Unit Test	Refine Point
Graph	on-taskgraph/lib/graphs/dell-racadm-set-bios-graph.js (Graph.Dell.Racadm.SetBIOS)			
Task	on-tasks/lib/task-data/tasks/dell-racadm-set-bios.js			
Base-task	on-tasks/lib/task-data/base-tasks/racadm-control-base.js			
Job	on-tasks/lib/jobs/racadm-control.js			
Schema	on-tasks/lib/task-data/dell-racadm-control.json			
Utils	on-tasks/lib/utils/job-utils/racadm-tool.js : <i>setBiosConfig</i>			
Service Required	N/A			
Catalog	N/A			

```
curl -X POST --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{
  "name": "Graph.Dell.Racadm.SetBIOS",
  "options": {
    "defaults": {
      "action": "setBiosConfig",
      "serverUsername": "",
      "serverPassword": "",
      "serverFilePath": "/tmp/tttt.xml"
    }
  }
}' 'http://192.168.128.10:8080/api/2.0/nodes/59ca21d73a0bb58304df131d/workflows'
```

VT-X feature

- 1) VT-X is covered in wsman. (字段名: Virtualization Technology), 通过对应的workflow起作用
- 2) VT-X is covered in racadm (字段名: ProcVirtualization). Defined in the file:
[on-tasks/lib/utils/job-utils/racadm-tool.js](#)方法: disableVTx, enableVTx

1) on-tasks/lib/task-data/schemas/dell-wsman-control.json这个文件有地方调用吗? 写的有问题

针对Get_BIOS_wsman涉及的options:

target: null, (用不到)
verifySSL: false, (取值 true or false)
domain: 'wsman' (用不到)

针对Set_BIOS_wsman涉及的options:

attributes: null, ({"name": "value": ""})
biosBootSequenceOrder: null, type: ["string"]
hddSequenceOrder: null, type: ["string"]
enableBootDevices: null, type: ["string"]
disableBootDevices: null, type: ["string"]
rebootJobType: null, (type: int, 取值 1, 2, 3)
scheduledStartTime: null, (形如: 20170928140000)
untilTime: null (形如: 20170928140000, scheduledStartTime < utilTime)

2. 数据处理Get Bios

POST /api/1.0/server/inventory/bios得到的数据与Racadm的比较, 其中这些字段没有
IoNonPostedPrefetch
GlobalSlotDriverDisable
Slot2