Virt-who Test Specification for RHEL (Base)

1 . Virt-who Configure cases

RHEL7-64830 - 1001-Check virt-who package from os repo

Step	Expected Result
***For all hypervisor	Refer to bug: BZ 1373391
1. open the latest rhel build: http://download.eng.pek2.redhat.com/rel-eng/	
2. check virt-who package exist or not in different arch, such as: http://download-node-02.eng.bos.redhat.com/rel-eng/RHEL-7.3-Snapshot-2.0/compose/Server/x86_64/os/Packages/	Virt-who should be shipped with Client, Workstation, Server-x86_64 Server-ppc64 Server-ppc64le ----not for rhel-6 Server-s390x ComputerNode, No virt-who package with: Server-aarch64

RHEL7-53802 - 1002-Install / uninstall virt-who package

Step	Expected Result
***For all hypervisor	Reuse and Branch test
1. prepare rhel host and make the yum repo is available, make sure the host is not registered to any servers	
2. check virt-who is installed or not by default # rpm -qa virt-who	-for rhel6.8, virt-who should be installed if choosing the "Virtualization Platform" -for rhel6.9 and rhel7.4, virt-who will not be auto installed if system install in beaker.
3. Install virt-who package. # yum install virt-who	virt-who package should be installed normally.

4. Check virt-who package # rpm -qa |grep virt-who	virt-who package should be listed.
5. check virt-who service default status # systemctl status virt-who ----rhel7 Loaded: loaded (/usr/lib/systemd/system/virt-who.service; disabled; vendor preset: disabled) Active: inactive (dead) # chkconfig --list |grep virt-who ----rhel6 virt-who 0:off 1:off 2:on 3:on 4:on 5:on 6:off	
6. restart virt-who service and check the status # /etc/init.d/virt-who restart # /etc/init.d/virt-who status	virt-who service should be restarted normally and the status is running
7. uninstall virt-who # rpm -e virt-who	virt-who should be uninstalled normally
8. check virtwho pachage # rpm -qa |grep virt-who	no virt-who package
9. install virt-who again # yum install virt-who	virt-who should be install normally

RHEL7-86175 - 1003-Check virt-who and virt-who-config man page

Step	Expected Result
***For all hypervisor	Refer to: BZ 1409987
1. enter virt-who man page # man virt-who	
2. Check all virt-who options and definition:	should list all command line options for virt-who, and the definition should be right. Bug BZ 1409987 existing
3. run virt-who with --help, # virt-who --help	should list virt-who command line options as "man virt-who" defined
4. Check all virt-who-config options and definition: #man virt-who-config	should list configuration options for virt-who under '/etc/virt-who.conf' and '/etc/virt-who.d/*.conf', and the definition should be right.

RHEL7-53803 - 1004-Check virt-who run normally with default configure

Step	Expected Result
***For all hypervisor	

1. register your virt-who host to Sam/Satellite/Stage and make sure virt-who is installed	
2. don't config anything and start virt-who service # systemctl restart virt-who	if your system is rhel6, please use /etc/init.d/virt-who for restart if your system is rhel7, please use systemctl instead. when don't configure anything, virt-who will run as libvirt local mode by default, but make sure libvirtd service is running in your virt-who host.
3. check virt-who status and process # systemctl status virt-who # ps -ef|grep virt-who	virt-who should be started normally, virt-who process exist.
4. check rhsm.log # tail -f /var/log/rhsm/rhsm.log	should show default host/guests info for local libvirt mode and the DEBUG function is disabled
5. stop virt-who service and check virt-who process # systemctl stop virt-who # ps -ef|grep virt-who	the virt-who process should be killed
6. run virt-who by CLI # virt-who	virt-who should be run normally for local libvirt mode, the output such as: No configurations found (are there any '.conf' files in /etc/virt-who.d?), using libvirt as backend Using configuration "env/cmdline" ("libvirt" mode) Using libvirt url: "" Report for config "env/cmdline" gathered, placing in datastore Sending update in guests lists for config "env/cmdline": 0 guests found
7. check virt-who status and rhsm.log	should show default host/guests info for local libvirt mode
8. press Ctrl+C to kill virt-who and check # ps -ef|grep virt-who	the virt-who process should be killed normally

RHEL7-53804 - 1005-Check virt-who debug function by CLI

Step	Expected Result
***For all hypervisor NOTE: disable the debug option in /etc/virt-who.conf	Refer to BZ 1322160 Bug 1509606 Bug 1510712
1. stop virt-who service # systemctl stop virt-who	

2.Run virt-who with -d option for your different modes, such as: # virt-who --libvirt --libvirt-owner=ACME_Corporation --libvirt-env=Library --libvirt-server=[Host2_IP] --libvirt-username=root --libvirt-password=redhat -d	DEBUG message will be found And will give WARNING like: The following cli options: --hyperv, --hyperv-owner, --hyperv-env, --hyperv-server, --hyperv-username, --hyperv-password are deprecated and will be removed in the next release. Please see 'man virt-who-config' for details on adding a configuration section.
3.Run virt-who without -d option for your different modes, such as: # virt-who --libvirt --libvirt-owner=ACME_Corporation --libvirt-env=Library --libvirt-server=[Host2_IP] --libvirt-username=root --libvirt-password=redhat	DEBUG message will not be found The WARNING info in anove step2 also will be producted ***Bug 1510712 , still print one DEBUG ***Bug 1460885 for satellite5, error info but can report normally

RHEL7-53805 - 1006-Check virt-who debug function by /etc/sysconfig/virt-who option

Step	Expected Result
***For all hypervisor NOTE: disable the debug option in /etc/virt-who.conf	Refer to BZ 1281715, BZ 1294746, BZ 1322160, BZ 1323020,
1. Enable debug # vi /etc/sysconfig/virt-who VIRTWHO_DEBUG=1	
2. restart virt-who service and check rhsm.log # systemctl restart virt-who	DEBUG message will be found Host/guest mapping json info show in the log
3. Disable debug # vi /etc/sysconfig/virt-who VIRTWHO_DEBUG=0	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who	DEBUG message will not be found Host/guest mapping json info is not exit in the log, it will show as the following: KVM/VDSM: X guests found RHEVM/HYPERV/ESX: X hypervisor found, X guest found.

RHEL7-53806 - 1007-Check virt-who oneshot function by CLI

Step	Expected Result
***For all hypervisor NOTE: disable the oneshot option in /etc/virt-who.conf	Refer to BZ 1297623 BZ 1273270 BZ 1366999 BZ 1448821

1.stop virt-who service # systemctl stop virt-who	
2.Run virt-who with -o option -> if local libvirt mode, please run virt-who default -> if remote libvirt mode, please run with --libvirt -> if vdsm mode, please run with --vdsm option -> if esx mode, please run with --esx option -> if rhevm mode, please run with --rhevm option -> if hyper-v mode, please run with --hyperv -> if xen mode, please run with --xen	Only send the mapping info one time and exit immediately and no error info. It shouldn't show redundant DEBUG info as the following: [hyperv mode]: "DEBUG: NTLM authentication successful DEBUG: Using NTLM authentication DEBUG: NTLM authentication successful DEBUG: Using NTLM authentication" [libvirt/vdsm/esx/rhevm/xen mode]: "Report for config "test-xen" gathered, putting to queue for sending"
3. run virt-who with -o option many time quickly (> 5 times)	- only send the mapping info one time and exit immediately without error info. - should print reminder info - "Thread 'env/cmdline' stopped after running once" to rhsm log. ***Bug BZ 1448821 existing for hyperv and rhevm, no the reminder info.
4. check virt-who process number no changes # ps -ef|grep virt-who	virt-who process number should always be only one.
5.Run virt-who without -o option	Always send the mapping as interval time and don't exit

RHEL7-53807 - 1008-Check virt-who oneshot function by /etc/sysconfig/virt-who option

Step	Expected Result
***For all hypervisor NOTE: disable the oneshot option in /etc/virt-who.conf	Refer to BZ 1300512
1. Enable oneshot and disable interval time # vi /etc/sysconfig/virt-who VIRTWHO_ONE_SHOT=1 #VIRTWHO_INTERVAL	
2. restart virt-who service # systemctl restart virt-who	
3. check rhsm.log # tail -f /var/log/rhsm/rhsm.log	only send the mapping info one time - should print reminder info - "Thread 'xxx' stopped after running once" to rhsm log. ***Bug BZ 1448821 existing for hyperv and rhevm, no the reminder info.

4. check virt-who process no changes # ps -ef|grep virt-who	No virt-who process exists.
5. Disable oneshot # vi /etc/sysconfig/virt-who VIRTWHO_ONE_SHOT=0	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who	always send the mapping info according to interval time

RHEL7-53808 - 1009-Check the send function for different interval value by CLI

Step	Expected Result
***For all hypervisor NOTE? - The send function means how long will virt-who check and send the host/guests json to SAM/Satellite/Stage Candlepin - Make sure the hypervirsior has no any update event trigger for this cases. - Disable the interval option in /etc/virt-who.conf	Refer to BZ 1220977 BZ 1230041 BZ 1294777 BZ 1314205 BZ 1271252 BZ 1366999, BZ 1314902, BZ 1320833 BZ 1392390, Bug 1509601
Before the case, make sure the host/hypervisor and guest have been registered successfully, the host/hypervisor is subscribed with Datacenter physical pool and one guest is registered with Datacenter bonus pool.	
1.stop virt-who service # systemctl stop virt-who	
2.Run virt-who without -i option # virt-who -d [Note]: please define the hypervisor mode by yourself, if no hypervisor mode defined, virt-who will run for local libvirt mode	virt-who will wait for 3600 seconds to loop, then give the "Duplicate report found, ignoring" and "No data to send, waiting for next interval" info feedback;
3. Check the consumed info on host/hypervisor and guest.	should still be subscribed with Datacenter pool successfully.
4.Run virt-who with -i option value (N < 60) # virt-who -d -i 10 # tail -f /var/log/rhsm/rhsm.log	It will show warning info as the following: "Interval value can't be lower than 60 seconds. Default value of 3600 seconds will be used." virt-who will wait for 3600 seconds to loop and give the "Duplicate report found, ignoring" and "No data to send, waiting for next interval" info feedback once; ***Bug 1519704, wrong reminder info

	"Interval value can't be lower than 3600 seconds"
5. Check the consumed info on host/hypervisor and guest.	should still be subscribed with Datacenter pool successfully.
6.Run virt-who with -i option value (N > 60) # virt-who -d -i 120 # tail -f /var/log/rhsm/rhsm.log	virt-who will wait for 120 seconds to loop and give the "Duplicate report found, ignoring" and "No data to send, waiting for next interval" info feedback once;
7. Check the consumed info on host/hypervisor and guest.	should still be subscribed with Datacenter pool successfully.
8. check virt-who thread number # ps -ef|grep virt-who	virt-who process should also be only one

RHEL7-53809 - 1010-Check the send function for different interval value by /etc/sysconfig/virt-who option

Step	Expected Result
***For all hypervisor NOTE: The send function means how long will virt-who check and send the host/guests json to SAM/Satellite/Stage Candlepin - Disable the interval option in /etc/virt-who.conf	Refer to BZ 1220977 BZ 1207984 BZ 1224190 BZ 1314205 BZ 1406709
Before the case, make sure the host/hypervisor and guest have been registered successfully, the host/hypervisor is subscribed with Datacenter physical pool and one guest is registered with Datacenter bonus pool.	
1. disable interval time # vi /etc/sysconfig/virt-who #VIRTWHO_INTERVAL [Note]: please define the hypervisor mode by yourself under /etc/sysconfig/virt-who or /etc/virt-who.d/*.conf, if no hypervisor mode defined, virt-who will run for local libvirt mode	
2. restart virt-who service and check rhsm.log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who will wait for 3600 seconds to loop, then give the "Duplicate report found, ignoring" and "No data to send, waiting for next interval" info feedback;
3. Check the consumed info on host/hypervisor and guest.	should still be subscribed with Datacenter pool successfully.
4. set interval time N < 60	

# vi /etc/sysconfig/virt-who VIRTWHO_INTERVAL=10	
5. restart virt-who service and check rhsm.log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	It will show warning info as the following: "Interval value can't be lower than 60 seconds. Default value of 3600 seconds will be used." virt-who will wait for 3600 seconds to loop and give the "Duplicate report found, ignoring" and "No data to send, waiting for next interval" info feedback once; ***Bug 1519704, wrong reminder info "Interval value can't be lower than 3600 seconds"
6. Check the consumed info on host/hypervisor and guest.	should still be subscribed with Datacenter pool successfully.
7. set interval time N > 60 # vi /etc/sysconfig/virt-who VIRTWHO_INTERVAL=120	
8. restart virt-who service and check rhsm.log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who will wait for 120 seconds to loop and give the "Duplicate report found, ignoring" and "No data to send, waiting for next interval" info feedback once;
9. Check the consumed info on host/hypervisor and guest.	should still be subscribed with Datacenter pool successfully.
7. check virt-who thread number # ps -ef|grep virt-who	virt-who process should also be only one with different interval time.
8. restart virt-who service 5 times and check virt-who thread number # ps -ef|grep virt-who	virt-who process should also be only one after virt-who restart.

RHEL7-86136 - 1011-[WebUI - Satellite] Check the Hypervisors task with different interval value

Step	Expected Result
***For all hypervisor	Rerfer **Bug 1409811**
1. Configure virt-who with only one hypervisor mode and 'VIRTWHO_INTERVAL=60'	
2. restart virt-who service.	virt-who can be restart and send host/guest mapping to satellite server

	successfully.
3. Check the hypervisors task info on Satellite WebUI -> 'Monitor' -> 'Tasks'.	restarting virt-who service will make one "Hypervisors" task. 1) then if no trigger to the guests, will no new tasks appear 2) if make trigger option to guests in each interval time, it will make new tasks each 60s, no flooding tasks queue.
4. Configure virt-who with only one hypervisor mode and 'VIRTWHO_INTERVAL=120'.	
5. restart virt-who service, then check hypervisors task info.	restarting virt-who service will make one "Hypervisors" task. 1) then if no trigger to the guests, will no new tasks appear 2) if make trigger option to guests in each interval time, it will make new tasks each 120s, no flooding tasks queue.
6. Configure virt-who with two hypervisor mode and 'VIRTWHO_INTERVAL=3600'.	
7. restart virt-who service, then check hypervisors task info.	restarting virt-who service will make two "Hypervisors" tasks. 1) then if no trigger to the guests, will no new tasks appear. 2) if make trigger option to guests in each interval time, it will make new tasks each 3600s, no flooding tasks queue.

RHEL7-53810 - 1012-Check the fetch function for different interval value by CLI

Step	Expected Result
***For all hypervisor NOTE: The fetch function means how long will virt-who check and fetch host/guests json from hypervisors	Refer to Bug 1509606
1.stop virt-who service # systemctl stop virt-who	
2.run virt-who without -i option # virt-who -d [Note]: please define the hypervisor mode by yourself, if no hypervisor mode defined, virt-who will run for local libvirt mode	will loop 3600 seconds by default and give log: Report for config "env/cmdline" gathered, placing in datastore
3.run virt-who with -i option value (N < 60) # virt-who -d -i 10 # tail -f /var/log/rhsm/rhsm.log	will loop 36o0 seconds by setting and give log: Report for config "env/cmdline" gathered, placing in datastore

4.run virt-who with -i option value (N > 60) # virt-who -d -i 120 # tail -f /var/log/rhsm/rhsm.log	will loop 120 seconds by setting and give log: Report for config "env/cmdline" gathered, placing in datastore

RHEL7-53811 - 1013-Check the fetch function for different interval value by /etc/sysconfig/virt-who

Step	Expected Result
***For all hypervisor NOTE: The fetch function means how long will virt-who check and fetch host/guests json from hypervisors ?	Refer to Bug 1509606
1. disable interval time # vi /etc/sysconfig/virt-who #VIRTWHO_INTERVAL [Note]: please define the hypervisor mode by yourself, if no hypervisor mode defined, virt-who will run for local libvirt mode	
2. restart virt-who service and check rhsm.log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	will loop 3600 seconds by default and give log: Report for config "env/cmdline" gathered, placing in datastore
3. set interval time N < 60 # vi /etc/sysconfig/virt-who VIRTWHO_INTERVAL=10	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	will loop 3600 seconds by default and give log: Report for config "env/cmdline" gathered, placing in datastore.
5. set interval time N > 60 # vi /etc/sysconfig/virt-who VIRTWHO_INTERVAL=120	
6. restart virt-who service and check rhsm.log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	will loop 120 seconds by default and give log: Report for config "env/cmdline" gathered, placing in datastore.

RHEL7-53812 - 1014-Check virt-who trigger function by hypervisor event

Step	Expected Result
***For all hypervisor NOTE: The trigger event means if the host or guests have some changes, such as add / delete / pause / resume / poweroff	Refer to BZ 1229211 BZ 1309165 BZ 1454541, **Bug 1458674**

/poweron, virt-who will be triggered by these event.	
1. set the interval value to 10 seconds	
2. restart virt-who service	
3. make sure host and guests have some changes, such as add a guest, and then check the rhsm.log (other event: add /delete/pause/resume/poweron/poweroff a guest)	1). if kvm, esx, xen, when trigger occurred, it will show remind info immediately as the following in the log. However, the update info can't show until wait for 60s. "Report for config "env/cmdline" gathered, placing in datastore" 2). if vdsm, rhevm, hyper-v, can't be triggered by auto, will loop 60 seconds by default to give new updated mapping, but shouldn't skip one interval ***BZ 1454541 existing for rhevm and hyper-v, skip one interval time. ***Bug 1415050 for xen/kvm, make redundant log
4. set the interval value to 120 seconds	
5. restart virt-who service	
6. make sure host and guests have some changes, such as add a guest, and then check the rhsm.log	1). if kvm, esx, xen, when trigger occurred, it will show remind info immediately. However, the update info can't show until wait for 120s. 2). if vdsm, rhevm, hyper-v, can't be triggered by auto, will loop 120 seconds by default to give new updated mapping, but shouldn't skip one interval. ***BZ 1454541 existing for rhevm and hyperv, skip one interval time. ***Bug 1415050 for xen/kvm, make redundant log
7. set the interval value to 3600 seconds	
8. restart virt-who service	
9. make sure host and guests have some changes, such as add a guest, and then check the rhsm.log	1). if kvm, esx, xen, when trigger occurred, it will show remind info immediately. However, the update info can't show until wait for 3600s. 2). if vdsm, rhevm, hyper-v, can't be triggered by auto, will loop 3600 seconds by default to give new updated mapping, but shouldn't skip one interval. ***BZ 1454541 existing for rhevm and hyperv, skip one interval time. ***Bug 1415050 for xen/kvm, make

	redundant log

RHEL7-53813 - 1015-Check virt-who -p function by CLI

Step	Expected Result
***For all hypervisor	Refer to BZ 1359640
1.stop virt-who service # systemctl stop virt-who	
2.Run virt-who with -p option # virt-who -p [Note]: please define the hypervisor mode by yourself, if no hypervisor mode defined, virt-who will run for local libvirt mode	virt-who should be run normally and the json info should be output as the following: {"hypervisors": [{"uuid": "c74a4d56-677e-dd13-828f-617c5cdf0329", "guests": [{"guestId": "4206ee69-f83e-c97f-521f-4af794d5cde9", "state": 5, "attributes": {"active": 0, "virtWhoType": "esx"}}], "facts": {"hypervisor.type": "VMware ESXi", "cpu.cpu_socket(s)": "4", "hypervisor.version": "6.0.0"}, "name": "bootp-73-5-222.rhts.eng.pek2.redhat.com"}]} - It should show host's attributions as the following: "facts(cpu.cpu_socket(s),hypervisor.type, hypervisor.version), guests name uuid" - It should show all guest's attributions like "attributes(active, virtWhoType) guestId state"
3. Run virt-who with -p -d option # virt-who -p -d	virt-who should be run normally and the json info should be output as the following: "hypervisors": [{ "facts": { "cpu.cpu_socket(s)": "4", "hypervisor.type": "VMware ESXi", "hypervisor.version": "6.0.0" }, "guests": [{ "attributes": { "active": 0, "virtWhoType": "esx"

	}, "guestId": "4206ee69-f83e-c97f-521f-4af794d5cde9", "state": 5 }], "name": "bootp-73-5-222.rhts.eng.pek2.redhat.com", "uuid": "c74a4d56-677e-dd13-828f-617c5cdf0329" }}]
4. export the json info to json.log # virt-who -p -d > json.log	virt-who should be run normally and the json info should be exported to json.log without any other [DEBUG] message.

RHEL7-53814 - 1016-Check virt-who -c option by CLI

Step	Expected Result
***Not for Local_Libvirt	Refer to BZ 1391913
1.stop virt-who service # systemctl stop virt-who	
2. Prepare two config file such as # vi /root/rhevm.conf [test-rhevm] type=rhevm server=https://10.66.79.23:443 username=admin@internal password=redhat owner=7661967 env=7661967 # vi /root/esx.conf [test-esx] type=esx server=10.73.3.222 username=administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967	
3.Run virt-who with -c option # virt-who -c /root/rhevm.conf -o -d # virt-who --config=/root/esx.conf -o -d	- with -c or --config option, virt-who should be run normally and the json info is OK. - virt-who will only run the configuration file, which the -c/--config option set.
4. move or copy the two config file to /etc/virt-who.d/ #ls /etc/virt-who.d/	

rhevm.conf esx.conf	
5. Run virt-who with -c option # virt-who -c /etc/virt-who.d/rhevm.conf -o -d # virt-who --config=/etc/virt-who.d/esx.conf -o -d	- with -c or --config option, virt-who should be run normally and the json info is OK. - virt-who will only run the configuration file, which the -c/--config option set. ***BZ 1391913 existing, -c option issue

RHEL7-87426 - 1017-Check virt-who all the listed options, such as: -m , -l , -r

Step	Expected Result
***For all hypervisor NOTE: Need to make sure: all the --help options are defined by "man virt-who"	Refer to BZ 1436581
1. check all the available options by --help and "man virt-who"	
2. check all the listed options, such as: -m, -l, -r	
3. run virt-who CLI with -m or --log-per-config # virt-who -d -o -m # virt-who -d -o --log-per-config	Write one log file per configured virtualization backend. Implies a log_dir of /var/log/rhsm/virtwho (Default: all messages are written to a single log file) ***BZ 1436581 existing, -m -l -f
4. run virt-who CLI with -l LOG_DIR or --log-dir=LOG_DIR # virt-who -d -o -d -l /var/log/rhsm/virtwho/ # virt-who -d -o -d --log-dir=/var/log/rhsm/virtwho/	-l LOG_DIR, --log-dir=LOG_DIR The absolute path of the directory to log to. (Default '/var/log/rhsm') ***BZ 1436581 existing, -m -l -f
5. run virt-who CLI with -r REPORTER_ID, --reporter-id=REPORTER_ID # virt-who -d -o -d -r xxx_id_test # virt-who -d -o -d --reporter-id=xxx_id_test	-r REPORTER_ID, --reporter-id=REPORTER_ID Label host/guest associations obtained by this instance of virt-who with the provided id. ***BZ 1436581 existing, -m -l -f

RHEL7-53815 - 1018-Check virt-who --sam and --satellite6 option by CLI

Step	Expected Result
***For all hypervisor	Refer to Bug 1409055 Bug 1368341
1.stop virt-who service	

# systemctl stop virt-who	
2. Run virt-who with --sam # virt-who -o -d --sam [Note]: please define the hypervisor mode by yourself, if no hypervisor mode defined, virt-who will run for local libvirt mode	**--sam** Report host/guest associations to the Subscription Asset Manager or Satellite 6 [default] virt-who should be run normally, the json info is OK - hypervisor can be registered to SAM server. - hypervisor can not be registered to Satellite6 server and Stage Candlepin ***Bug 1368341 Bug 1409055
4. Run virt-who with --satellite6 # virt-who -o -d --satellite6	**--satellite6** Report host/guest associations to the Satellite 6 Server virt-who should be run normally and the json info is OK. - hypervisor can be registered to Satellite6 server. - hypervisor can not be registered to SAM server and Stage Candlepin ***Bug 1368341 Bug 1409055

RHEL7-53816 - 1019-[Satellite5.X] Check virt-who --satellite5 option by CLI

Step	Expected Result
***Only for satellite5.X server	
1.stop virt-who service # systemctl stop virt-who	
2. Run virt-who with --satellite5 # virt-who --satellite5 --satellite-server=SAT_SERVER --satellite-username=SAT_USERNAME --satellite-password=SAT_PASSWORD	--satellite5 Report host/guest associations to the Satellite 5 Server virt-who should be run normally and the json info is OK

RHEL7-53817 - 1020-[Satellite5.X] Check virt-who --satellite5 option by /etc/sysconfig/virt-who

Step	Expected Result
***Only for satellite5.X server	
1. config satellite5 option in /etc/sysconfig/virt-who, such as: VIRTWHO_SATELLITE5=1 VIRTWHO_SATELLITE_SERVER=xxxx VIRTWHO_SATELLITE_USERNAME=xxxx VIRTWHO_SATELLITE_PASSWORD=xxxx	
2. restart virt-who service and check	--satellite5 Report host/guest

rhsm.log	associations to the Satellite 5 Server virt-who should be run normally and the json info is OK

RHEL7-53818 - 1021-Check virt-who --owner option by CLI

Step	Expected Result
***Not for Local_Libvirt, VDSM NOTE: need to track BZ 1458168 - - [RFE] When run virt-who by CLI, it should only run the CLI config mode, ignore other virt-who config files.	Refer to: BZ 1295325, BZ 1211435, BZ 1372620 BZ 1457101, Bug 1458168
1.stop virt-who service # systemctl stop virt-who	
2. run virt-who without owner option, such as: # virt-who --libvirt --libvirt-env=7661967 --libvirt-server=10.66.129.224 --libvirt-username=root --libvirt-password=redhat -o -d	without owner, virt-who fail to start with error: " Required command line argument: --hyperv-owner is not set." Note: should no "Traceback" info in the log.
3. run virt-who with owner value is null, such as: # virt-who --libvirt --libvirt-owner= --libvirt-env=7661967 --libvirt-server=10.66.129.224 --libvirt-username=root --libvirt-password=redhat -o -d	owner is null, virt-who should show error info: " virt-who can't be started: Option `owner` needs to be set in config `env/cmdline`" Note: should no "Traceback" info in the log.
4. run virt-who with an wrong owner value such as: # virt-who --libvirt --libvirt-owner=xxxxxxx --libvirt-env=7661967 --libvirt-server=10.66.129.224 --libvirt-username=root --libvirt-password=redhat -o -d	- For Satellite6.2/6.3: with an wrong owner, virt-who should show error info, like: "ManagerError: Cannot send data to: Default_Organization, because owner from configuration: xxxxxx is different”" NOTE: if virt-who host has been registerted to "org2", the error info should be "ManagerError: Cannot send data to: org2, because owner from configuration: xxxxxx is different” -For Stage Candlepin: with an wrong owner, virt-who should show error info, like: "ManagerError: Communication with subscription manager failed with

	code 404: Organization with id xxxxxx could not be found."
5. run virt-who with a right owner value, such as: # virt-who --libvirt --libvirt-owner=7661967 --libvirt-env=7661967 --libvirt-server=10.66.129.224 --libvirt-username=root --libvirt-password=redhat -o -d	with a right owner, virt-who should be run normally

RHEL7-53819 - 1022-Check virt-who --owner option by /etc/sysconfig/virt-who

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to: BZ 1295325, BZ 1211435, BZ 1372620 BZ 1457101 Bug 1510310
1. config /etc/sysconfig/virt-who with all available options, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7661967 VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.66.129.60 VIRTWHO_ESX_USERNAME=root VIRTWHO_ESX_PASSWORD=redhat	
2. restart virt-who service # systemctl restart virt-who	start virt-who and send mapping normally.
3. only config /etc/sysconfig/virt-who, disable owner option, such as: VIRTWHO_ESX=1 # VIRTWHO_ESX_OWNER=7661967 VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.66.129.60 VIRTWHO_ESX_USERNAME=root VIRTWHO_ESX_PASSWORD=redhat	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl status virt-who	1. failed to start virt-who with reminder info, such as: "'VIRTWHO_ESX_OWNER is not set" and "virt-who can't be started: no valid configuration found" ***Bug 1516173 existing for remote libvirt, virt-who still running. ***Bug 1530254 existing for XEN/ESX/HYPER/RHEVM, wrong reminder info show. 2. should not run default local libvirt mode.
5. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report the valid one, but fail to send the bad one with reminder info, such as:

	"'VIRTWHO_ESX_OWNER is not set" ***Bug 1530254 existing for XEN/ESX/HYPER/RHEVM, wrong reminder info show.
6. only config /etc/sysconfig/virt-who with owner is null, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER= VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.66.129.60 VIRTWHO_ESX_USERNAME=root VIRTWHO_ESX_PASSWORD=redhat	
7. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but fail to send mapping with reminder info, such as: "ManagerError: Communication with subscription manager failed with code 415:" ***Bug 1516173 [Comment 7] existing, failed to start virt-who, libvirt special.
8. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info - "ManagerError: Communication with subscription manager failed with code 415:" ***Bug 1530254 existing for XEN/ESX/HYPER/RHEVM, wrong reminder info show.
9. only config /etc/sysconfig/virt-who with an wrong owner value without non-ASCII, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=xxxx VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.66.129.60 VIRTWHO_ESX_USERNAME=root VIRTWHO_ESX_PASSWORD=redhat	
10. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - - For Satellite6: "ManagerError: Cannot send data to: Default_Organization, because owner from configuration: xxxxxx is different”" -For Stage Candlepin: "ManagerError: Communication with subscription manager failed with code 404: Organization with id

	xxxxxx could not be found."
11. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info - - For Satellite6: "ManagerError: Cannot send data to: Default_Organization, because owner from configuration: xxxxxx is different”" -For Stage Candlepin: "ManagerError: Communication with subscription manager failed with code 404: Organization with id xxxxxx could not be found."
12. only config /etc/sysconfig/virt-who with an wrong owner value, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=??©¥®ðπ? VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.66.129.60 VIRTWHO_ESX_USERNAME=root VIRTWHO_ESX_PASSWORD=redhat	
13. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - - stage candlepin: "JSON parsing error: No JSON object could be decoded" and "Communication with subscription manager failed with code 500" - satellite6: "(owner_id, config['owner'])" and "UnicodeDecodeError: 'ascii' codec can't decode byte 0xe7 in position 0: ordinal not in range(128)" **NOTE:** **- for stage, the owner/env is stable, just with number.** **- for satellite, when new create an organization, cannot contain characters other than ascii alpha numerals**
14. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like step13.

RHEL7-53820 - 1023-Check virt-who --owner option by /etc/virt-who.d config file

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to: BZ 1295325, BZ 1211435, BZ 1372620, BZ 1401773, BZ 1363943 BZ 1457101
1. create a config file with all available options in /etc/virt-who.d/, such as: [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=7661967	
2. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who and send mapping normally
3. only create a config file without owner option in /etc/virt-who.d/, such as: [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat # owner=7661967 env=7661967	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl status virt-who	failed to start virt-who with reminder info - "KeyError: 'owner not in stage-xen'" in rhsm log and "virt-who can't be started: no valid configuration found" by command "systemctl status virt-who.service" ***Bug 1516173 [comment 7] existing for RHEVM/XEN/HYPERV/LIBVIRT, still can start virt-who.
5. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to send the valid one, but failed to send the bad one with reminder info - "KeyError: 'owner not in stage-xen'" in rhsm log ***Bug 1516173 [step2] existing for ESX, reminder info is not uniform with others.
6. only create a config file with owner is null in /etc/virt-who.d/, such as: [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=	

env=7661967	
7. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send the mapping with reminder info - "ManagerError: Communication with subscription manager failed with code 415:"
8. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info - "ManagerError: Communication with subscription manager failed with code 415:"
9. create a config file with an wrong owner value without non-ASCII in /etc/virt-who.d/, such as: [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=xxxxxx env=7661967	
10. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - - For Satellite6: "ManagerError: Cannot send data to: Default_Organization, because owner from configuration: xxxxxx is different”" -For Stage Candlepin: "ManagerError: Communication with subscription manager failed with code 404: Organization with id xxxxxx could not be found."
11. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like above step10
12. create a config file with an wrong owner value with non-ASCII in /etc/virt-who.d/, such as: [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=??©¥®ðπ? env=7661967	

13. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - - stage candlepin: "JSON parsing error: No JSON object could be decoded" and "Communication with subscription manager failed with code 500" - satellite6: "(owner_id, config['owner'])" and "UnicodeDecodeError: 'ascii' codec can't decode byte 0xe7 in position 0: ordinal not in range(128)" **- for stage, the owner/env is stable, just with number.** **- for satellite, when new create an organization, cannot contain characters other than ascii alpha numerals**
14. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like above step 13.

RHEL7-53821 - 1024-Check virt-who --env option by CLI

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to: BZ 1372620, BZ 1409056 BZ 1457101, BZ 1211435
1.stop virt-who service # systemctl stop virt-who	
2. run virt-who without env, such as: # virt-who --libvirt --libvirt-owner=7661967 --libvirt-server=10.66.129.224 --libvirt-username=root --libvirt-password=redhat -o -d	without env, virt-who should show error info, like: "virt-who can't be started: Option `env` needs to be set in config `env/cmdline`" Note: should no "Traceback" info in the log ***Bug 1530232 for libvirt, still report mapping.
3. run virt-who with an wrong env value such as: # virt-who --libvirt --libvirt-owner=7661967 --libvirt-env=xxxxxx --libvirt-server=10.66.129.224 --libvirt-username=root --libvirt-password=redhat -o -d	with an wrong env, - for Satellite6: virt-who should start normally with error info, like: "ManagerError: Cannot send data to: Default_Organization, because Satellite env: Library differs from configuration: xxxxx" - for Stage Candlepin: virt-who should fail to send mapping with reminder info - "???". ***Bug 1530426 for stage, still report normally

	***Bug 1530232 for libvirt, still report mapping.
4. run virt-who with a right env value, such as: # virt-who --libvirt --libvirt-owner=7661967 --libvirt-env=7661967 --libvirt-server=10.66.129.224 --libvirt-username=root --libvirt-password=redhat -o -d	with a right env, virt-who should be run normally

RHEL7-53822 - 1025-Check virt-who --env option by /etc/sysconfig/virt-who

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to: BZ 1372620, BZ 1409056 BZ 1457101 Bug 1510310
1. config /etc/sysconfig/virt-who with all available options, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7661967 VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.66.129.60 VIRTWHO_ESX_USERNAME=root VIRTWHO_ESX_PASSWORD=redhat	
2. restart virt-who service # systemctl restart virt-who	start virt-who and send mapping normally.
3. only config /etc/sysconfig/virt-who, disable env option, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7661967 #VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.66.129.60 VIRTWHO_ESX_USERNAME=root VIRTWHO_ESX_PASSWORD=redhat	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who	1. failed to start virt-who with reminder info, such as: "'VIRTWHO_ESX_ENV is not set" and "virt-who can't be started: no valid configuration found" ***Bug 1530290: existing for libvirt, virt-who still running. ***Bug 1530232 for libvirt, also send mapping out. ***Bug 1530254 existing for XEN/ESX/HYPER/RHEVM, wrong reminder info show. -2. should not run default local libvirt mode.
5. create another valid configuration by	start virt-who normally, succeed to report

/etc/virt-who.d/xxx.conf, then restart virt-who service	the valid one, but fail to send the bad one with reminder info, such as: "'VIRTWHO_ESX_OWNER is not set" ***Bug 1530254 existing for XEN/ESX/HYPER/RHEVM, wrong reminder info show. ***Bug 1530232 for libvirt, also send mapping out.
6. only config /etc/sysconfig/virt-who with env option is null, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7661967 VIRTWHO_ESX_ENV= VIRTWHO_ESX_SERVER=10.66.129.60 VIRTWHO_ESX_USERNAME=root VIRTWHO_ESX_PASSWORD=redhat	
7. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but fail to send mapping with reminder info, such as: "ManagerError: Communication with subscription manager failed with code 415:" ***Bug 1530290 for ESX/HYPERV/RHEVM/XEN, fail to start virt-who ***Bug 1530232 for LIBVIRT, also send mapping out.
8. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info - "ManagerError: Communication with subscription manager failed with code 415:" ***Bug 1530232 for LIBVIRT, also send mapping out. ***Bug 1530254 existing for XEN/ESX/HYPER/RHEVM, wrong reminder info show.
9. only config /etc/sysconfig/virt-who with an wrong env value without non-ASCII, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7661967 VIRTWHO_ESX_ENV=xxxx VIRTWHO_ESX_SERVER=10.66.129.60 VIRTWHO_ESX_USERNAME=root VIRTWHO_ESX_PASSWORD=redhat	
10. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - for Satellite62: "ManagerError: Cannot send data to: Default_Organization,

	because Satellite env: Library differs from configuration: xxxx" ***Bug 1530426 for stage, also send out mapping
11. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like above step10. ***Bug 1530426 for stage, also send out mapping
12. only config /etc/sysconfig/virt-who with an wrong env value with non-ASCII, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7661967 VIRTWHO_ESX_ENV=??©¥®ðπ? VIRTWHO_ESX_SERVER=10.66.129.60 VIRTWHO_ESX_USERNAME=root VIRTWHO_ESX_PASSWORD=redhat	
13. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - - stage candlepin: "JSON parsing error: No JSON object could be decoded" - satellite6: "(owner_id, environment_name, config['env'])" and "UnicodeDecodeError: 'ascii' codec can't decode byte 0xe7 in position 0: ordinal not in range(128)" **NOTE:** **- for stage, the owner/env is stable, just with number.** **- for satellite, when new create an organization, cannot contain characters other than ascii alpha numerals** ***Bug 1530426 for stage, also send out mapping
14. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like above step13 ***Bug 1530426 for stage, also send out mapping

RHEL7-53823 - 1026-Check virt-who --env option by /etc/virt-who.d config file

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1318566 BZ 1363943, BZ 1409056 BZ 1457101

1. create a config file with all available options in /etc/virt-who.d/, such as: [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=7661967	
2. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who and send mapping normally
3. only create a config file without env option in /etc/virt-who.d/, such as: [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 #env=7661967	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl status virt-who	failed to start virt-who with reminder info - "[sat-esx]: Required option: "env" not set." in rhsm log and "virt-who can't be started: no valid configuration found" by command "systemctl status virt-who.service" ***Bug 1530290 for HEPERV/XEN/ESX/RHEVM/LIBVIRT, still succeed to start and send mapping
5. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to send the valid one, but failed to send the bad one with reminder info like above step4. **Bug 1530290 for HEPERV/XEN/ESX/RHEVM/LIBVIRT, still succeed to start and send mapping.
6. only create a config file with env option is null in /etc/virt-who.d/, such as: [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=	
7. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send the mapping with reminder info - "ManagerError: Communication with subscription manager failed with code 415:"

	***Bug 1530290 for all, still send mapping out
8. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info - "ManagerError: Communication with subscription manager failed with code 415:" ***Bug 1530290 for all, still send mapping out
9. only create a config file with an wrong env value without non-ASCII in /etc/virt-who.d/, such as: [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=xxxxxx	
10. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - for satellite62: "ManagerError: Cannot send data to: Default_Organization, because Satellite env: Library differs from configuration: xxxx" ***Bug 1530426 for stage, also send out mapping
11. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like above step10 ***Bug 1530426 for stage, also send out mapping
12. only create a config file with an wrong env value with non-ASCII in /etc/virt-who.d/, such as: [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=??©¥®ðπ?	
13. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - - stage candlepin: "JSON parsing error: No JSON object could be decoded" - satellite6: "(owner_id, environment_name, config['env'])"

	and "UnicodeDecodeError: 'ascii' codec can't decode byte 0xe7 in position 0: ordinal not in range(128)" ***Bug 1530426 for stage, also send out mapping
14. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like above step13. ***Bug 1530426 for stage, also send out mapping

RHEL7-79906 - 1027-Check --[virtwho_type]-username and --[virtwho_type]-password option by CLI

Step	Expected Result
***Not for Local_Libvirt, VDSM **NOTE: should track Bug 1458168** - [RFE] When run virt-who by CLI, it should only run the CLI config mode, ignore other virt-who config files. **NOTE: Need to track** Bug 1506156 - When username/password options are disabled or the values are not right or even no values, virt-who should provide some uniform message	Refer to BZ 1337407 BZ 1458168, Bug 1506156, Bug 1510760
1.stop virt-who service # systemctl stop virt-who	
2. run virt-who without "--[virtwho_type]-username", such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.66.129.224 --esx-password=redhat -o -d	without --virtwho_type-username, virt-who should show error info as the following: "Required parameter 'username' is not set, exiting"
3. run virt-who with "--[virtwho_type]-username" value is null, such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.66.129.224 --	with --virtwho_type-username value is null, virt-who should show error info as the following: "Required parameter 'username' is not set, exiting"

esx-username= --esx-password=redhat -o -d	
4. run virt-who with wrong"--[virtwho_type]-username" , such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.66.129.224 --esx-username=xxxxx --esx-password=redhat -o -d	with wrong value of --virtwho_type-username, virt-who should start normally and show error info as the following: -for esx: 'Cannot complete login due to an incorrect user name or password.' - for rhevm: 'Unable to connect to RHEV-M server: 401 Client Error: Unauthorized' - for xen:['SESSION_AUTHENTICATION_FAILED', 'xxxxxx', 'Authentication failure'] -for hyperv: 'Incorrect domain/username/password' -for libvirt: libvirtError: Cannot recv data: Host key verification failed.: Connection reset by peer
5. run virt-who without "--[virtwho_type]-password", such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.66.129.224 --esx-username=root -o -d	without password, virt-who should start normally and show error info as the following: -for esx: 'Cannot complete login due to an incorrect user name or password.' - for rhevm: 'Unable to connect to RHEV-M server: 401 Client Error: Unauthorized' -for xen: 'SESSION_AUTHENTICATION_FAILED', 'root', 'Authentication failure' -for hyperv: "Incorrect domain/username/password" -for libvirt: no error, can send mapping successfully.
6. run virt-who with "--[virtwho_type]-password" value is null, such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.66.129.224 --esx-username=root -o -d --esx-password= -d -	with password value is null, virt-who should start normally and show error info as the following: -for esx: 'Cannot complete login due to an incorrect user name or password.' - for rhevm: 'Unable to connect to RHEV-M server: 401 Client Error: Unauthorized' -for xen: 'SESSION_AUTHENTICATION_FAILED', 'root', 'Authentication failure' -for hyperv: "Incorrect domain/username/password"

o	-for libvirt: no error, can send mapping successfully.
7. run virt-who with wrong"--[virtwho_type]-password" , such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.66.129.224 --esx-username=root --esx-password=xxxx -o -d	with wrong password, virt-who should start normally and show error info as the following: -for esx: 'Cannot complete login due to an incorrect user name or password.' - for rhevm: 'Unable to connect to RHEV-M server: 401 Client Error: Unauthorized' -for xen: ['SESSION_AUTHENTICATION_FAILED', 'root', 'Authentication failure'] -for hyperv: 'Incorrect domain/username/password' -for libvirt: no error, can send mapping successfully.
8. run virt-who with correct"--[virtwho_type]-username" and "--[virtwho_type]-password" , such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.66.129.224 --esx-username=root --esx-password=redhat -o -d	with correct --virtwho_type-username and --virtwho_type-password, virt-who can send mapping to server successfully.
9. run virt-who with correct"--[virtwho_type]-username" and "--[virtwho_type]-password" and these value with single quotes or double quotes, such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.66.129.224 --esx-username="root" --esx-password="redhat" -o -d	virt-who can send mapping to server successfully.

RHEL7-79907 - 1028-Check VIRTWHO_[virtwho_type]_USERNAME and VIRTWHO_[virtwho_type]_PASSWORD by /etc/sysconfig/virt-who

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1337407 BZ 1458184 Bug 1 1512778
1. config /etc/sysconfig/virt-who with all available options, such as: VIRTWHO_=1 VIRTWHO_ESX_OWNER=7985933 VIRTWHO_ESX_ENV=7985933 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_SERVER=10.73.2.95 VIRTWHO_ESX_PASSWORD=Welcome1!	
2. restart virt-who service # systemctl restart virt-who	start virt-who and send mapping normall
3. config /etc/sysconfig/virt-who, disable username option, such as: VIRTWHO_=1 VIRTWHO_ESX_OWNER=7985933 VIRTWHO_ESX_ENV=7985933 #VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_SERVER=10.73.2.95 VIRTWHO_ESX_PASSWORD=Welcome1!	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl status virt-who # ps -ef |grep virt-who	failed to start virt-who with reminder info "'VIRTWHO_RHEVM_USERNAME' is nc log, and "Status: "virt-who can't be starte configuration found"" when run "# systen who" - virt-who should not be runing and proce ***Bug 1426040 for libvirt, should suppor and password. ***Bug 1530841 for xen/esx/hyperv/rhevr reminder info
5. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report but failed to send the bad one with remin "Error: reading environment variables for Required env. variable: 'VIRTWHO_RHEVM_USERNAME' is not ***Bug 1426040 for libvirt, should suppor and password. ***Bug 1530841 for xen/esx/hyperv/rhevr reminder info
6. only config /etc/sysconfig/virt-who with username option value is null, such as: VIRTWHO_=1 VIRTWHO_ESX_OWNER=7985933 VIRTWHO_ESX_ENV=7985933 VIRTWHO_ESX_USERNAME= VIRTWHO_ESX_SERVER=10.73.2.95	

VIRTWHO_ESX_PASSWORD=Welcome1!	
7. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to get r reminder info - "'VIRTWHO_RHEVM_USERNAME' is nc ***Bug 1516261, virt-who can not start ***Bug 1426040 for libvirt, should suppor and password. ***Bug 1530841 for xen/esx/hyperv/rhevr reminder info
8. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report but failed to send the bad one with remin "'VIRTWHO_RHEVM_USERNAME' is nc ***Bug 1426040 for libvirt, should suppor and password. ***Bug 1530841 for xen/esx/hyperv/rhevr reminder info
9. only config /etc/sysconfig/virt-who with an wrong username with wrong value without non-ASCII, such as: VIRTWHO_=1 VIRTWHO_ESX_OWNER=7985933 VIRTWHO_ESX_ENV=7985933 VIRTWHO_ESX_USERNAME=XXXXXX VIRTWHO_ESX_SERVER=10.73.2.95 VIRTWHO_ESX_PASSWORD=Welcome1!	
10. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to get r uniform reminder info - "Cannot complete login due to an incorre password" ***Bug 1506156 [comment2] existing, log for different hypervisors, such as: -for esx: 'Cannot complete login du incorrect user name or password.' - for rhevm: 'Unable to connect to F server: 401 Client Error: Unauthoriz - for xen:['SESSION_AUTHENTICAT 'xxxxxx', 'Authentication failure'] -for hyperv: 'Incorrect domain/username/password' -for libvirt: Cannot recv data: Permi (publickey,gssapi-keyex,gssapi-with password).: Connection reset by pe
11. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report but failed to send the bad one with unifor

	such as: "Cannot complete login due to an incorre password" ***Bug 1506156 [comment2] existing, log for different hypervisors like above step1
12. only config /etc/sysconfig/virt-who with an wrong username with wrong value with non-ASCII, such as: VIRTWHO_=1 VIRTWHO_ESX_OWNER=7985933 VIRTWHO_ESX_ENV=7985933 VIRTWHO_ESX_USERNAME=??©¥®ðπ? VIRTWHO_ESX_SERVER=10.73.2.95 VIRTWHO_ESX_PASSWORD=Welcome1!	
13. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to get r uniform reminder info - "Cannot complete login due to an incorre password." ***Bug 1518112 existing, virt-who fail to s
14. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report but failed to send the bad one with unifor such as: "Cannot complete login due to an incorre password." ***Bug 1518112 existing, virt-who fail to s
15. only config /etc/sysconfig/virt-who without password, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7985933 VIRTWHO_ESX_ENV=7985933 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_SERVER=10.73.2.95 #VIRTWHO_ESX_PASSWORD=Welcome1!	
16. restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl restart virt-who # ps -ef |grep virt-who	failed to start virt-who with reminde "No valid configurations found" - virt-who should not be running an doesn't exist. ***Bug 1426040 for libvirt, should s username and password.
17. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report but failed to send the bad one with unifor such as: "[env/cmdline]: Required option: "passwo
18. only config /etc/sysconfig/virt-who with password is null, such as: VIRTWHO_ESX=1	

VIRTWHO_ESX_OWNER=7985933 VIRTWHO_ESX_ENV=7985933 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_SERVER=10.73.2.95 VIRTWHO_ESX_PASSWORD=	
19. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to get m uniform reminder info - "Cannot complete login due to an incorre password." ***Bug 1506156 existing, log is not unifor hypervisors, such as: -for esx: 'Cannot complete login due to a name or password.' - for rhevm: 'Unable to connect to RHEV- Client Error: Unauthorized' -for xen: ['SESSION_AUTHENTICATION 'Authentication failure' -for hyperv: "Incorrect domain/username/ -for libvirt: no error, can send mapping su ***Bug 1426040 for libvirt, should suppor and password. ***Bug 1516645 [Comment 4], can not st service.
20. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report but failed to send the bad one with unifor like step19.
21. only config /etc/sysconfig/virt-who with an wrong password without non-ASCII, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7985933 VIRTWHO_ESX_ENV=7985933 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_SERVER=10.73.2.95 VIRTWHO_ESX_PASSWORD=XXXXX	
22. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send uniform reminder info - "Cannot complete login due to an incorre password." ***Bug 1506156 existing, log is not unifor hypervisors, such as: -for esx: 'Cannot complete login due to a name or password.' - for rhevm: 'Unable to connect to RHEV- Client Error: Unauthorized'

	-for xen: ['SESSION_AUTHENTICATION 'Authentication failure'] -for hyperv: 'Incorrect domain/username/ -for libvirt: no error, can send mapping su ***Bug 1426040 for libvirt, should suppor and password.
23. create another valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service	start virt-who normally, succeed to report but failed to send the bad one with remin step22.
24. only config /etc/sysconfig/virt-who with an wrong password with non-ASCII, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7985933 VIRTWHO_ESX_ENV=7985933 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_SERVER=10.73.2.95 VIRTWHO_ESX_PASSWORD=??©¥®ðπ?	
25. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to get r reminder info - "'Cannot complete login due to an incorre password." ***BZ 1357761 Bug 1503271 , problem w Unicode characters in a hypervisor's acc
26. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report but failed to send the bad one with remin above step25.

RHEL7-79908 - 1029-Check virt-who --username and --password option by /etc/virt-who.d config file

Step	Expected Result
***Not for Local_Libvirt, VDSM **NOTE: Need to track** Bug 1506156 - When username/password options are disabled or the values are not right or even no values, virt-who should provide some uniform message	Refer to BZ 1337407 BZ 1357761 BZ 1406694Bug 1512778
1. config /etc/sysconfig/virt-who with all available options, such as: [test-hyperv1] type=hyperv server=10.73.5.203	

username=administrator password=Welcome1 owner=ACME_Corporation env=Library	
2. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who and send mapping normally.
3. only create a config file without username option in /etc/virt-who.d/, such as: [test-hyperv1] type=hyperv server=10.73.5.203 #username=administrator password=Welcome1 owner=ACME_Corporation env=Library	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl status virt-who # ps -ef |grep virt-who	failed to start virt-who with reminder info - ""username" is missing in: "stage-xen"" in rhsm log, and "virt-who can't be started: no valid configuration found" when run "# systemctl status virt-who" - virt-who should not be running and process doesn't exist. ***Bug 1426040 for libvirt, should support use username and password.
5. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info, such as: "Required option: "username" is missing in: "stage-xen"" in rhsm log.
6. only create a config file with username value is null in /etc/virt-who.d/, such as: [test-hyperv1] type=hyperv server=10.73.5.203 username= password=Welcome1 owner=ACME_Corporation env=Library	
7. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to get mapping with reminder info - "Cannot complete login due to an incorrect user name or password." ***Bug 1506156 existing, log is not uniform for different hypervisors, such as: -for esx: 'Cannot complete login due to an

	incorrect user name or password.' - for rhevm: 'Unable to connect to RHEV-M server: 401 Client Error: Unauthorized' - for xen:['SESSION_AUTHENTICATION_FAILED', ' ', 'Authentication failure'] -for hyperv: 'Incorrect domain/username/password' -for libvirt: Cannot recv data: Permission denied (publickey,gssapi-keyex,gssapi-with-mic, password).: Connection reset by peer
8. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like above step7. ***Bug 1506156 existing, log is not uniform for different hypervisors
9. only create a config file with an wrong username value without ASCii in /etc/virt-who.d/, such as: [test-hyperv1] type=hyperv server=10.73.5.203 username=XXXXXX password=Welcome1 owner=ACME_Corporation env=Library	
10. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to get mapping with reminder info - "'Cannot complete login due to an incorrect user name or password.'" ***Bug 1506156 existing, log is not uniform for different hypervisors, such as: -for esx: 'Cannot complete login due to an incorrect user name or password.' - for rhevm: 'Unable to connect to RHEV-M server: 401 Client Error: Unauthorized' - for xen:['SESSION_AUTHENTICATION_FAILED', 'xxxxxx', 'Authentication failure'] -for hyperv: 'Incorrect domain/username/password'

	-for libvirt: Cannot recv data: Permission denied (publickey,gssapi-keyex,gssapi-with-mic, password).: Connection reset by peer
11. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like above step10.
12. only create a config file with an wrong username value with ASCii in /etc/virt-who.d/, such as: [test-hyperv1] type=hyperv server=10.73.5.203 username=??©¥®ðπ? password=Welcome1 owner=ACME_Corporation env=Library	
13. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to get mapping with reminder info - "Cannot complete login due to an incorrect user name or password." ***Bug 1518112 existing, virt-who fail to start
14. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with uniform reminder info, such as: "Cannot complete login due to an incorrect user name or password." ***Bug 1518112 existing, virt-who fail to start
15. only config file with password option disabled in /etc/virt-who.d, such as: [test-hyperv1] type=hyperv server=10.73.5.203 username=administrator # password= owner=ACME_Corporation env=Library	
16. restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl status virt-who # ps -ef |grep virt-who	failed to start virt-who with reminder info - "Required option: "password" not set." in rhsm log, and "virt-who can't be started: no valid configuration found" when run "# systemctl status virt-who" - virt-who should not be running and process doesn't exist. ***Bug 1426040 for libvirt, should support use username and password.
17. create another valid	start virt-who normally, succeed to report the valid one,

configuration, then restart virt-who service	but failed to send the bad one with uniform reminder info, such as: "Required option: "password" is missing in: "stage-rhevm""
18. only config file with password value is null in /etc/virt-who.d, such as: [test-hyperv1] type=hyperv server=10.73.5.203 username=administrator password= owner=ACME_Corporation env=Library	
19. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - "'Cannot complete login due to an incorrect user name or password." ***Bug 1506156 existing, log is not uniform for different hypervisors, such as: -for esx: 'Cannot complete login due to an incorrect user name or password.' - for rhevm: 'Unable to connect to RHEV-M server: 401 Client Error: Unauthorized' - for xen:['SESSION_AUTHENTICATION_FAILED', ' ', 'Authentication failure'] -for hyperv: 'Incorrect domain/username/password' -for libvirt: still can report mappings with Bug 1426040
20. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with uniform reminder info like above step19.
21. only config file with password value is wrong without ASCii in /etc/virt-who.d, such as: [test-hyperv1] type=hyperv server=10.73.5.203 username=administrator password=xxx owner=ACME_Corporation	

env=Library	
22. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, succeed to report the valid one, but failed to send the bad one with uniform reminder info, such as: "'Cannot complete login due to an incorrect user name or password." ***Bug 1506156 existing, log is not uniform for different hypervisors, such as: -for esx: 'Cannot complete login due to an incorrect user name or password.' - for rhevm: 'Unable to connect to RHEV-M server: 401 Client Error: Unauthorized' - for xen:['SESSION_AUTHENTICATION_FAILED', ' xxx', 'Authentication failure'] -for hyperv: 'Incorrect domain/username/password' -for libvirt: still can report mappings with Bug 1426040
23. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like above step22.
24. only config file with password value is wrong with ASCii in /etc/virt-who.d, such as: [test-hyperv1] type=hyperv server=10.73.5.203 username=administrator password=??©¥®ðπ? owner=ACME_Corporation env=Library	
25. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who normally, but failed to get mapping with reminder info - "'Cannot complete login due to an incorrect user name or password." ***BZ 1357761 Bug 1503271 , problem with virt-who using Unicode characters in a hypervisor's account password.
26. create another valid configuration, then restart virt-who service	start virt-who normally, succeed to report the valid one, but failed to send the bad one with reminder info like above step25.
27. use a config file with	

the correct username and password value and these value with single quotes or double quotes in /etc/virt-who.d/, such as: [test-hyperv1] type=hyperv server=10.73.5.203 username="administrator" password='Welcome1' owner=ACME_Corporation env=Library	
28. restart virt-who service and check rhsm.log # systemctl restart virt-who	start virt-who and send mapping normally.

RHEL7-87319 - 1030-Check virt-who config file extension by /etc/virt-who.d

Step	Expected Result
***Not for Local_Libvirt, VDSM	
1. create a config file with .conf extension in /etc/virt-who.d/, such as: #vi /etc/virt-who.d/test-hyperv.conf [test-hyperv] type=hyperv server=10.73.5.203 username=administrator password=Welcome1 owner=ACME_Corporation env=Library	
2. restart virt-who service and check rhsm.log # systemctl restart virt-who	virt-who can be restarted and send the "test-hyperv" host/guest mapping info successfully.
3. modify the "test-hyperv.conf" filename with different extension, such as: test-hyperv.conf.bkp #mv test-hyperv.conf test-hyperv.conf.bkp	filename modify successfully.
4. restart virt-who and check rhsm.log again	virt-who can be restarted, but cannot get and send the "test-hyperv" host/guest mapping info. virt-who only run the .conf configure file under /etc/virt-who.d, will ignore all other extention.

RHEL7-79900 - 1031-Check virt-who can be killed normally in terminal side

Step	Expected Result
***For all hypervisor	Refer to BZ 1326588 BZ 1401760 BZ 1448343 BZ 1445127
1. register your virt-who host to Sam/Satellite/Stage and make sure virt-who is installed	
2. Run virt-who at CLI with "-i -d" options as the following: [root@dell-per720xd-01 virt-who.d]# virt-who --esx --esx-owner=ACME_Corporation --esx-env=Library --esx-server=10.73.2.95 --esx-username=Administrator@vsphere.local --esx-password=Welcome1! -i 100 -d	virt-who run normally
3. Press "Ctrl+c" in terminal side to end virt-who and check virt-who's log.	virt-who can be killed normally it shouldn't show any error info in the log Bug BZ 1448343 existing for esx, "The session is not authenticated" issue. Bug BZ 1445127 existing for xen, No xen mode thread terminated notice info

RHEL7-79901 - 1032-Check log info normally if run virt-who in CLI when it is running.

Step	Expected Result
***For all hypervisor	Refer to BZ 1321250
1. Restart virt-who service # systemctl restart virt-who	
2. Check virt-who's status # systemctl status virt-who	Virt-who is running.
3. Run virt-who with -o option and check the log in terminal. -> if local libvirt mode, please run virt-who default -> if remote libvirt mode, please run with --libvirt -> if vdsm mode, please run with --vdsm option -> if esx mode, please run with --esx option -> if rhevm mode, please run with --rhevm option -> if hyper-v mode, please run with --hyperv	It shouldn't show info as the following: "[virtwho.init INFO] MainProcess(27574):MainThread @virtwho.py:parseOptions:637 - Using reporter_id='dell-pesc440-01.rhts.eng.bos.redhat.com"" It should only show info as the following: ""virt-who seems to be already running. If not, remove /var/run/virt-who.pid"."

RHEL7-53824 - 1033-Check /etc/sysconfig/virt-who and /var/run/virt-who.pid permission

Step	Expected Result
***For all hypervisor	Refer to BZ 1308416
1. Check the virt-who config file # ll /etc/sysconfig/virt-who	The permissions of the virt-who config file default to 600 # ll /etc/sysconfig/virt-who -rw-------. 1 root root 2164 Sep 16 17:04 /etc/sysconfig/virt-who
2. Start virt-who service	
3. Check the permissions of the PID file created # ll /var/run/virt-who.pid	The permissions of the PID file is 600 # ll /var/run/virt-who.pid -rw-------. 1 root root 4 May 10 14:31 /var/run/virt-who.pid

RHEL7-53825 - 1034-Start virt-who service by ssh

Step	Expected Result
***For all hypervisor	
1. start virt-who service by ssh, such as the virt-who host is 10.66.144.10, restart it by: # ssh 10.66.144.10 "systemctl restart virt-who"	virt-who service can be restart normally
2. check the service status # ssh 10.66.144.10 "systemctl status virt-who"	virt-who service status is running

RHEL7-79912 - 1035-Check virt-who uses entry_point for its /usr/bin/virt-who executable

Step	Expected Result
***For all hypervisor	Refer to BZ 1347130
1. Stop virt-who service	
2. Create a virtwho.py in any path # cat > virtwho.py print "test virt-who execute"	
3. Run virt-who command # virt-who	virt-who can send host/guest mapping to server. It also shouldn't show info as the following: "test virt-who execute"

RHEL7-53826 - 1036-Config 2+ different hypervisors in /etc/sysconfig/virt-who

Step	Expected Result
***Not for Local_libvirt	
1. config 2+ different hypervisors at the same time in /etc/sysconfig/virt-who, such as: # Options for RHEV-M mode VIRTWHO_RHEVM=1 VIRTWHO_RHEVM_OWNER=7661967 VIRTWHO_RHEVM_ENV=7661967 VIRTWHO_RHEVM_SERVER=https://10.66.79.23:443 VIRTWHO_RHEVM_USERNAME=admin@internal VIRTWHO_RHEVM_PASSWORD=redhat # Options for HYPER-V mode VIRTWHO_HYPERV=1 VIRTWHO_HYPERV_OWNER=7661967 VIRTWHO_HYPERV_ENV=7661967 VIRTWHO_HYPERV_SERVER=10.66.128.9 VIRTWHO_HYPERV_USERNAME=administrator VIRTWHO_HYPERV_PASSWORD=Welcome1	virt-who mode, enable only one option from following 5: # Use libvirt to list virtual guests [default] #VIRTWHO_LIBVIRT=0 # Use vdsm to list virtual guests #VIRTWHO_VDSM=0 # Register ESX machines using vCenter #VIRTWHO_ESX=0 # Register guests using RHEV-M #VIRTWHO_RHEVM=0 # Register guest using Hyper-V #VIRTWHO_HYPERV=0
2. restart virt-who service and check rhsm.log	virt-who only support one mode config in /etc/sysconfig/virt-who, so the rhsm.log should show only one hypervisor's host/guest json, not two.

RHEL7-53827 - 1037-Config http_proxy and https_proxy in /etc/sysconfig/virt-who

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1227259
1.Make sure virt-who host can't access to remote host/hypervisor directly. You can restrict the IP as following guide for windows: http://jingyan.baidu.com/article/3f16e003d05c602590c10366.html [by firewall] if enable firewall, need to set ICMP for ping, such as: http://www.cnblogs.com/acmy/archive/2012/03/01/2375695.html	Q: this case can be running for hyper-v and esxi, but how about the linux proxy?
2. Make sure virt-who host can access to squid server (10.73.3.248) ,and the squid server can connect remote host / hypervisors	
3. config virt-who with http_proxy, such as: # vi /etc/sysconfig/virt-who VIRTWHO_ESX=1	http_proxy=http://xxxx https_proxy=https://xxxx

http_proxy=http://10.73.3.248:3128 VIRTWHO_ESX_OWNER=7661967 VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.73.3.231 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_PASSWORD=Welcome1! [NOTE]: ESX,RHEVM support https_proxy=https://xxxx HYPERV support http_proxy=http://xxxx [Optional]: no_proxy=satserv.redhat.com	
4. restart virt-who service and check the log message	The mapping info should be found in /var/log/rhsm/rhsm.log normally.

RHEL7-53828 - 1038-Check guests attributes by curl

Step	E
***For all hypervisor	R 1
1. login to Sam/Satellite/Stage Candlepin web UI to check the hypervisor's uuid, such as: 827e7c16-cdb6-49b8-a4a2-24d8db2f2e58	
2. - for Stage Candlepin: # curl -u virt-who-test:redhat --insecure --request GET https://subscription.rhn.stage.redhat.com:443/subscription/consumers/[HOST_UUID]/guestids/[GUEST_UUID] | python -mjson.tool HOST_UUID: come from stage candlepin webui GUEST_UUID: come from rhsm_log - for satellite server: # curl -u admin:admin --insecure -k https://satserv.redhat.com/katello/api/v2/systems/[GUEST_UUID] | python -mjson.tool GUEST_UUID: come from satellite webui -for sam server: # curl -u admin:admin --insecure -k https://samserv.redhat.com/sam/api/consumers/[HOST_UUID]/guestids/[GUEST_UUID] | python -mjson.tool HOST_UUID: come from sam webui GUEST_UUID: come from virt.uuid	if { "2 d "8 "2 } if s "(

RHEL7-53829 - 1039-Check mapping info after restart virt-who and rhsmcertd.service

Step	Expected Result
***For all hypervisor	
1. register host to sate/sam/satellite	
2. config virt-who, restart virt-who and check host/guest mapping	after restart virt-who, can get the host/guest mapping info normally
3. restart rhsmcertd.service, check virt-who status and rhsm.log # systemctl restart rhsmcertd	restart rhsmcertd service successfully without error
4. check virt-who status # systemctl status virt-who	after restart rhsmcertd.service, virt-who should be running
5. restart virt-who and check rhsm.log	host/guest mapping info can be updated to server normally

RHEL7-53830 - 1040-Create a config file with one hypervisor in /etc/virt-who.d/

Step	Expected Result
***Not for Local_Libvirt	Refer to bug: BZ 1436617
1. disable hypervisor options in /etc/sysconfig/virt-who	
2. create a new config file including one hypervisor in /etc/virt-who.d, such as: # vi /etc/virt-who.d/libvirt.conf [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=7661967	
3. restart virt-who service and check rhsm.log	virt-who should fetch and send the host/guests mapping info to server normally

RHEL7-53831 - 1041-Create a config file with two different hypervisors in /etc/virt-who.d/

Step	Expected Result

***Not for Local_Libvirt	Refer to BZ 1295644 BZ 1444718
1. disable hypervisor options in /etc/sysconfig/virt-who	
2. create a new config file including two or more hypervisors in /etc/virt-who.d, such as: # vi /etc/virt-who.d/mult.conf [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=7661967 [test-esx] type=esx server=10.66.79.5 username=Administrator@vsphere.local password=qwer1234P! owner=7661967 env=7661967	
3. restart virt-who service and check rhsm.log	- the two hypervisors' host/guests json info should be showed together, such as: 2017-07-19 23:20:27,453 [virtwho.destination_-3103206552139750212 INFO] MainProcess(5388):Thread-4 @subscriptionmanager.py:hypervisorCheckIn:202 - Sending update in hosts-to-guests mapping for config "destination_-3103206552139750212": 5 hypervisors and 3 guests found 2017-07-19 23:20:27,453 [virtwho.destination_-3103206552139750212 DEBUG] MainProcess(5388):Thread-4 @subscriptionmanager.py:hypervisorCheckIn:203 - Host-to-guest mapping: { "a4db4d56-5db1-593f-3700-7c3942fd0c26": [], "9fea4d56-5ed5-ddfe-b806-e7872726c0d7": [{ "guestId": "421cc74d-a0d8-3608-09d2-73c6d77e7d0e", "state": 5, "attributes": { "active": 0, "virtWhoType": "esx" } }, { "guestId": "421c583c-5d6a-79e4-d50b-22db99686f6b", "state": 1,

	"attributes": { "active": 1, "virtWhoType": "esx" } }], "42766af0-9742-4d38-8ecc-1ef434fb58f0": [], "0eb6c08a-596a-473a-9fbd-e5aca3f8538a": [{ "guestId": "bb59d0d9-0f3c-4809-8401-dd041cc22746", "state": 1, "attributes": { "active": 1, "virtWhoType": "rhevm" } }], "896ff3be-eca0-4e39-a519-d09e425bf4e4": [] - virt-who should distinguish to show "Duplicate report for config "xxx" found, ignoring" in rhsm log for each hypervisor, such as: 2017-05-24 04:32:09,899 [virtwho.destination_2598285595642390377 DEBUG] MainProcess(2880):Thread-6 @virt.py:_get_data_common:522 - Duplicate report found for config "test-esx", ignoring 2017-05-24 04:32:09,899 [virtwho.destination_2598285595642390377 DEBUG] MainProcess(2880):Thread-6 @virt.py:_get_data_common:522 - Duplicate report found for config "test-libvirt", ignoring 2017-05-24 04:32:09,899 [virtwho.destination_2598285595642390377 DEBUG] MainProcess(2880):Thread-6 @virt.py:_send_data:560 - No data to send, waiting for next interval

RHEL7-53832 - 1042-Create two config files for two different hypervisors in /etc/virt-who.d

Step	Expected Result
***Not for Local_Libvirt	Refer to: BZ 1444718
1. disable hypervisor options in /etc/sysconfig/virt-who	
2. create two new config files including different hypervisors in /etc/virt-who.d, such as: # vi /etc/virt-who.d/libvirt.conf [test-libvirt]	

type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=7661967 # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.5 username=Administrator@vsphere.local password=qwer1234P! owner=7661967 env=7661967	
3. restart virt-who service and check rhsm.log	- the two hypervisors' host/guests json info should be showed together, such as: 2017-07-19 23:20:27,453 [virtwho.destination_-3103206552139750212 INFO] MainProcess(5388):Thread-4 @subscriptionmanager.py:hypervisorCheckIn:202 - Sending update in hosts-to-guests mapping for config "destination_-3103206552139750212": 5 hypervisors and 3 guests found 2017-07-19 23:20:27,453 [virtwho.destination_-3103206552139750212 DEBUG] MainProcess(5388):Thread-4 @subscriptionmanager.py:hypervisorCheckIn:203 - Host-to-guest mapping: { "a4db4d56-5db1-593f-3700-7c3942fd0c26": [], "9fea4d56-5ed5-ddfe-b806-e7872726c0d7": [{ "guestId": "421cc74d-a0d8-3608-09d2-73c6d77e7d0e", "state": 5, "attributes": { "active": 0, "virtWhoType": "esx" } }, { "guestId": "421c583c-5d6a-79e4-d50b-22db99686f6b", "state": 1, "attributes": { "active": 1, "virtWhoType": "esx" } }], "42766af0-9742-4d38-8ecc-1ef434fb58f0": [], "0eb6c08a-596a-473a-9fbd-e5aca3f8538a": [{

	"guestId": "bb59d0d9-0f3c-4809-8401-dd041cc22746", "state": 1, "attributes": { "active": 1, "virtWhoType": "rhevm" } }], "896ff3be-eca0-4e39-a519-d09e425bf4e4": [] - virt-who should distinguish to show "Duplicate report for config "xxx" found, ignoring" in rhsm log for each hypervisor, such as: 2017-05-24 04:32:09,899 [virtwho.destination_2598285595642390377 DEBUG] MainProcess(2880):Thread-6 @virt.py:_get_data_common:522 - Duplicate report found for config "test-esx", ignoring 2017-05-24 04:32:09,899 [virtwho.destination_2598285595642390377 DEBUG] MainProcess(2880):Thread-6 @virt.py:_get_data_common:522 - Duplicate report found for config "test-libvirt", ignoring 2017-05-24 04:32:09,899 [virtwho.destination_2598285595642390377 DEBUG] MainProcess(2880):Thread-6 @virt.py:_send_data:560 - No data to send, waiting for next interval

RHEL7-53833 - 1043-Create a config file in /etc/virt-who.d/, config the different mode in /etc/sysconfig/virt-who

Step	Expected Result
***Not for Local_Libvirt	
1. create a new config file including one hypervisor in /etc/virt-who.d, such as: # vi /etc/virt-who.d/libvirt.conf [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=7661967	
2. config /etc/sysconfig/virt-who for another hypervisor, such as: # vi /etc/sysconfig/virt-who VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7661967	

VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.73.2.15 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_PASSWORD=Welcome1!	
3. restart virt-who service and check rhsm.log	the two hypervisors' host/guests json info should be found together at the same same for rhsm.log;

RHEL7-53834 - 1044-re-register virt-who host when configured for two different modes

Step	Expected Result
***Not for Local_Libvirt	
1. register virt-who host to Sam/Satellite/Stage	
2. create a new config file including one hypervisor in /etc/virt-who.d, such as: # vi /etc/virt-who.d/libvirt.conf [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=7661967	
3. config /etc/sysconfig/virt-who for another hypervisor, such as: # vi /etc/sysconfig/virt-who VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7661967 VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.73.2.15 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_PASSWORD=Welcome1!	
4. restart virt-who service and check rhsm.log	the two hypervisors' host/guests json info should be found together at the same same for rhsm.log;
5. unregister virt-who host from Sam/Satellite/Stage then restart virt-who service	it will show error to rhsm log: SubscriptionManagerUnregisteredError: Unable to read certificate, system is not registered or you are not root
6. register the virt-who host again	check the rhsm.log, virt-who should fetch and send all the hypervisors hosts/guests info to server normally.

RHEL7-53835 - 1045-Create a config file in /etc/virt-who.d/, config the same mode in /etc/sysconfig/virt-who

Step	Expected Result
***Not for Local_Libvirt	
1. create a new config files with one hypervisor in /etc/virt-who.d, such as esx mode (vcenter1): # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.2.15 username=Administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967	
2. config the same mode as above in /etc/sysconfig/virt-who, such as another esx mode (vcenter2): # vi /etc/sysconfig/virt-who VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=7661967 VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.73.2.15 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_PASSWORD=Welcome1!	
3. restart virt-who service and check rhsm.log	the two hypervisors' host/guests json info should be found together at the same time for rhsm.log;
4. make vcenter2 is not reachable, and restart virt-who again	only fetch and send vcenter1 host/guests mapping info to server

RHEL7-53836 - 1046-Create the config file in /etc/virt-who.d/, config and run virt-who from CLI

Step	Expected Result
***Not for Local_Libvirt	
1. disable hypervisor options in /etc/sysconfig/virt-who	
2. create a new config file including one hypervisor in /etc/virt-who.d, such as: # vi /etc/virt-who.d/libvirt.conf [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967	

env=7661967	
3. disable virt-who service	
4. run virt-who CLI with another hypervisor, such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.66.79.5 --esx-username=Administrator@vsphere.local --esx-password=qwer1234P! -o -d	the two hypervisors' host/guests json info should be found together at the same same for rhsm.log;

RHEL7-79905 - 1047-Check virt-who can handle quoted config values

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1336507
1. Disable hypervisor options in /etc/sysconfig/virt-who	
2. Create a new config file including one hypervisor in /etc/virt-who.d and make sure all value with single quotes '', such as: # vi /etc/virt-who.d/libvirt.conf ['test-libvirt'] type='libvirt' server='10.66.129.60' username='root' password='redhat' owner='7661967' env='7661967'	
3. Restart virt-who service and check virt-who's log	virt-who can send host/guest mapping info to server successfully, it shouldn't generate any error info.
4. Modify the config file to all values with double quotes "", such as: # vi /etc/virt-who.d/libvirt.conf ["test-libvirt"] type="libvirt" server="10.66.129.60" username="root" password="redhat" owner="7661967" env="7661967"	
5. Restart virt-who service and check virt-who's log	virt-who can send host/guest mapping info to server successfully, it shouldn't generate any error info.

RHEL7-79897 - 1048-Check virt-who won't check swap config file in /etc/virt-who.d/

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1323029
1. disable hypervisor options in /etc/sysconfig/virt-who	
2. use vim edit a config file: # vim /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.2.95 username=Administrator@vsphere.local #password=Welcome1! owner=ACME_Corporation env=Library	
3. don't save and don't quit vim, make sure esx.conf.swp exist # ls -a /etc/virt-who.d/ . .. libvirt.conf .libvirt.conf.swp	
4. restart virt-who and check virt-who's log	virt-who restart successfully, it shouldn't generate any error info in the log.

RHEL7-87424 - 1049-Check virt-who-password command for the encrypted password function

Step	Expected Result
***Not for Local_Libvirt, VDSM	
1. run virt-who-password without any option for **ad"min** encrypted # virt-who-password Password:ad"min	Use following as value for encrypted_password key in the configuration file: fc8f8c77d1eac210cf044e3402cd038a
2. run virt-who-password with -p option for **ad"min** encrypted without double quotes # virt-who-password -p ad\"min	output should be: fc8f8c77d1eac210cf044e3402cd038a
3. run virt-who-password with -p option for **ad"min** encrypted with double quotes # virt-who-password -p "ad\"min"	output should be: fc8f8c77d1eac210cf044e3402cd038a
4. run virt-who-password without any option for **"ad"min"** encrypted # virt-who-password Password:"ad"min"	
5. run virt-who-password with -p option for "**ad"min**" encrtyped	output should be: d01bdc94bf59d8f7236a38da48cfd385

# virt-who-password -p \"ad\"min\"	
6. repeat above step2-4 with --password # virt-who-password --password=ad\"min # virt-who-password --password="ad\"min" # virt-who-password --password=\"ad\"min\"	output should be same with using -p.

RHEL7-53837 - 1050-Check encrypted_password option in /etc/virt-who.d config file

Step	Expected Result
***Not for Local_Libvirt, VDSM NOTE: Before the case beginning, remove the key file under /var/lib/virt-who if it exists. # rm /var/lib/virt-who/key	Refer to BZ 1318887 BZ 1336507 BZ 1461685 BZ 1447264 BZ 1472727
1. configure one hypervisor conf file in /etc/virt-who.d/, and use encrypted_password option without value to instead of password option , such as: [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator #password=qwer1234P encrypted_password= owner=ACME_Corporation env=Library	
2. start virt-who service and check rhsm.log	virt-who should be started normally, but fail to get and send mapping with error info as the following: "MainThread @main.py:main:131 - [Errno 2] No such file or directory: '/var/lib/virt-who/key'" ***BZ 1472727 existing, fail to start virt-who
3. configure two hypervisor conf files in /etc/virt-who.d/, and use encrypted_password option without value to instead of only one hypervisor's password option, such as: [test-hyperv] type=hyperv server=10.66.128.9	

username=Administrator #password=qwer1234P encrypted_password= owner=ACME_Corporation env=Library [test-esx] type=esx owner=ACME_Corporation env=Library server=10.73.3.234 username=Administrator@vsphere.local password=Welcome1!	
4. start virt-who service and check rhsm.log	- it should only fail to run the [test-hyperv] mode with error: "MainThread @main.py:main:131 - [Errno 2] No such file or directory: '/var/lib/virt-who/key'" - it should get and send [test-esx] mapping normally. ***BZ 1472727 existing, fail to start virt-who
5. use virt-who-password command to encrypt the hypervisor's password, such as: # virt-who-password Password: 44dbba931cba7c9a6569cd2871ba7e57	it should make a key file in /vat/lib/virt-who
6. run step1&2 again.	[need to track BZ 1461685] virt-who should start normally, but fail to get [test-hyperv] mapping with error: "Option "encrypted_password" in config named "test-hyperv" can't be decrypted, possibly corrupted'" NOTE: virt-who should not use libvirt as backend.

	***Bug 1519643 existing, failed to start virt-who
7. run step3&4 again.	virt-who should start normally, get and send [test-esx] mapping successfully, but still fail to run [test-hyperv] with error: "Option "encrypted_password" in config named "test-hyperv" can't be decrypted, possibly corrupted'"
8. use encrypted_password option with above value (in step5) to instead of password option in /etc/virt-who.d/ config file, such as: [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator #password=qwer1234P encrypted_password=44dbba931cba7c9a6569cd2871ba7e57 owner=ACME_Corporation env=Library	
9. start virt-who service and check rhsm.log	virt-who should fetch and send the hosts/guests info to server normally.
10. use an wrong encrypted_password value to check again, such as: [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator #password=qwer1234P encrypted_password=xxxxxxxxxxxxxxxxxx owner=ACME_Corporation env=Library	
11. restart virt-who service and check rhsm.log	[need to track BZ 1461685] virt-who should start normally, but fail to get [test-hyperv] mapping with error: "Option "encrypted_password" in config named "test-hyperv" can't be decrypted, possibly

	corrupted'" NOTE: virt-who should not use libvirt as backend. ***Bug 1519643, failed to start virt-who
12. Config encrypted_password to correct value with single quotes('') or double quotes(""), such as: [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator encrypted_password='44dbba931cba7c9a6569cd2871ba7e57' /["44dbba931cba7c9a6569cd2871ba7e57"] owner=ACME_Corporation env=Library	
13. Restart virt-who service and check virt-who's log	virt-who can send mapping to server successfully.

RHEL7-53838 - 1051-Check rhsm_username and rhsm_password option in /etc/virt-who.d config file

Step	Expected Result
***Not for Local_Libvirt, VDSM ***Not for SAM with Bug 1403122	Refer to BZ1229235 BZ 1336507 BZ 1406642
1. create a config file with rhsm_username and rhsm_password option in /etc/virt-who.d/ config file, the rhsm_username and rhsm_password is the account for SAM/Satellite/Stage Candlepin, such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=ACME_Corporation/Default_Organization env=Library rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin [NOTE]: In satellite:	

owner=Default_Organization In SAM: owner=ACME_Corporation	
2. keep virt-who host has been registered # subscription-manager register	virt-who host register successfully
3. restart virt-who service and check rhsm.log	virt-who should fetch and send the hosts/guests info to server normally.
4. configure with rhsm_username and rhsm_password disabled or value is null, such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=ACME_Corporation/Default_Organization env=Library rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm #rhsm_username=admin #rhsm_password=admin	after restart virt-who, can report mapping normally. **NOTE: when virt-who host has been registered, when run virt-who, it will first to use the rhsm options in /etc/virt-who.d/xxx.conf, if the rhsm options are missing, it will use the default same with virt-who host.** so when rhsm_username/password missing, virt-who will use the username/password same with when register virt-who host.
5. use a wrong rhsm_username to check again, such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=ACME_Corporation/Default_Organization env=Library rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=xxx rhsm_password=admin	after resart virt-who, can't report info to server with reminder info, such as: - For Satellite62: "Communication with subscription manager failed with code 500" [Bug 1406642 WONTFIX] - For Stage Candlepin: "Communication with subscription manager failed with code 401: The user has been disabled, if this is a mistake, please contact customer service"
6. use a wrong rhsm_password to check again, such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P	after resart virt-who, can't report info to server with reminder info - "Invalid username or password" or "Communication with subscription manager failed

owner=ACME_Corporation/Default_Organization env=Library rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=xxx	with code 500" [Bug 1406642 WONTFIX]
7. unregister virt-who host # subscription-manager unregister	
8. use all the valid configuration, such as # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=ACME_Corporation/Default_Organization env=Library rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin	after restart virt-who, can succeed to report the mapping to server.
9. configure with rhsm_username disabled or value is null to check again, such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=ACME_Corporation/Default_Organization env=Library rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm #rhsm_username=admin rhsm_password=admin	after restart virt-who, failed to report mapping with error info: "Unable to read certificate, system is not registered or you are not root"
10. configure with rhsm_password disabled or value is null to check again, such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=ACME_Corporation/Default_Organization env=Library rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm	after restart virt-who, failed to report mapping with error info: "Unable to read certificate, system is not registered or you are not root"

rhsm_username=admin #rhsm_password=admin	
11. use a wrong rhsm_username to check again, such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=ACME_Corporation/Default_Organization env=Library rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=xxx rhsm_password=admin	after resart virt-who, can't report info to server with reminder info, such as: - for Satellite62: "Communication with subscription manager failed with code 500" [Bug 1406642 WONTFIX] - for Stage Candlepin, now the reminder info is - "Communication with subscription manager failed with code 401: The user has been disabled, if this is a mistake, please contact customer service" - for satellite5 server: "Unable to send host/guest association to the satellite: Unable to login to satellite5 server"
12. use a wrong rhsm_password to check again, such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=ACME_Corporation/Default_Organization env=Library rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=xxx	after resart virt-who, can't report info to server with reminder info: " Invalid username or password" or "Communication with subscription manager failed with code 500" [Bug 1406642 WONTFIX] for satellite5 server: "Unable to send host/guest association to the satellite: Unable to login to satellite5 server"
13. update rhsm_username and rhsm_password to correct value with single qutoes(') or double quotes(""), such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P	

owner=ACME_Corporation/Default_Organization env=Library rhsm_username='admin' /"admin" rhsm_password='redhat'/"redhat"	
14. restart virt-who service and check rhsm.log again	virt-who can send host/guest mapping to server successfully.

RHEL7-53839 - 1052-Check rhsm_username and rhsm_encrypted_password option in /etc/virt-who.d config file

Step	Expected Result
***Not for Local_Libvirt, VDSM ***Not for SAM with Bug 1403122	Refer to BZ1229235 BZ 1336507 BZ 1447264 BZ 1472727 BZ 1461685
1. unregister virt-who host # subscription-manager unregister	
2. use virt-who-password command to encrypt the rhsm_password for SAM/Satellite/Stage candlepin such as: # virt-who-password Password: 41ad63c59881a3e58037014ca2d3edcb	
3. configure one hypervisor conf file in /etc/virt-who.d/, and use encrypted_rhsm_password option without value to instead of password option , such as: [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.234 username=Administrator@vsphere.local password=Welcome1! rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=admin #rhsm_password=admin rhsm_encrypted_password=	
4. start virt-who service and check rhsm.log	- virt-who should start normally, but fail to send [sat-esx] mapping with err "Option "encrypted_password" in config named "test-

	hyperv" can't be decrypte possibly corrupted"" and "Unable to read certificate system is not registered o you are not root" - should not run local libvi
5. configure two hypervisor conf files in /etc/virt-who.d/, one is valid, the other uses rhsm_encrypted_password option without value to instead of hypervisor's password option, such as: [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.234 username=Administrator@vsphere.local password=Welcome1! rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=admin #rhsm_password=admin rhsm_encrypted_password= [sat-rhevm] type=rhevm owner=Default_Organization env=Library server=https://bootp-73-3-249.eng.pek2.redhat.com:443/ovirt-engine/ username=admin@internal password=admin rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin	
6. start virt-who service and check rhsm.log	virt-who should start normally, report the valid one successfu but fail to run the bad one with error: "Option "encrypted_password' config named "sat-esx" can't b decrypted, possibly corrupted"" and "Unable to rea certificate, system is not registered or you are not root"
7. create a config file with rhsm_username and using rhsm_encrypted_password	

option to instead rhsm_password with the value created in step1, such as: [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.234 username=Administrator@vsphere.local password=Welcome1! rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=admin #rhsm_password=admin rhsm_encrypted_password=41ad63c59881a3e58037014ca2d3edcb	
8. restart virt-who service and check rhsm.log	virt-who should fetch and send the hosts/guests info to server normally.
9. use a wrong rhsm account to check again, such as: # /etc/virt-who.d/hyperv.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.234 username=Administrator@vsphere.local password=Welcome1! rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm rhsm_username=admin #rhsm_password=admin rhsm_encrypted_password=xxxx	
10. restart virt-who service and check rhsm.log	virt-who should start normally, but fail to send mapping with error: "Option "rhsm_encrypted_passwo cannot be decrypted, possibly corrupted" and "Communication with subscription manager faile with code 500:"
11. update rhsm_username and rhsm_encrypted_password to correct value with single qutoes('') or double quotes(""), such as: # /etc/virt-who.d/hyperv.conf [sat-esx]	

type=esx owner=Default_Organization env=Library server=10.73.3.234 username=Administrator@vsphere.local password=Welcome1! rhsm_username='admin'/"admin" #rhsm_password=admin rhsm_encrypted_password='41ad63c59881a3e58037014ca2d3edcb'/ "41ad63c59881a3e58037014ca2d3edcb"	
12. restart virt-who service and check rhsm.log	virt-who should fetch and send the hosts/guests infc server normally.

RHEL7-87439 - 1053-Check rhsm_hostname, rhsm_port and rhsm_prefix options in /etc/virt-who.d

Step	Expected Result
***Not for Local_Libvirt, VDSM **NOTE:** **The "rhsm_hostname/port/prefix" options in /etc/virt-who.d/ will override the rhsm.conf setup.**	Refer to BZ 1412425 BZ 1404878 BZ 1450747 BZ 1450738
1. unregister virt-who host # subscription-manager unregister And keep rhsm_hostname/port/prefix options with the default value in /etc/rhsm/rhsm.conf, such as: hostname = subscription.rhsm.redhat.com port = 443 prefix = /subscription	
2. configure the "hostname", "port", and "prefix" value to the default, such as: # vi /etc/rhsm/rhsm.conf hostname = subscription.rhsm.redhat.com port = 443 prefix = /subscription	
3. configure a valid configuration with rhsm parameters configured in /etc/virt-who.d/, such as: #vi /etc/virt-who.d/libvirt.conf [sate-libvirt] type=libvirt server=10.66.144.8 username=root password=redhat	-for satlliste: rhsm_username=admin rhsm_password=admin rhsm_hostname=bootp-73-3-164.eng.pek2.redhat.com rhsm_port=443 rhsm_prefix=/rhsm -for stage candlepin:

owner=Default_Organization env=Library rhsm_username=admin rhsm_password=admin rhsm_hostname = bootp-73-3-218.eng.pek2.redhat.com rhsm_port = 443 rhsm_prefix=/rhsm	rhsm_username=[your test accout] rhsm_password=[your test accout] rhsm_hostname=subscription.rhsm.stage.redhat.com rhsm_port=443 rhsm_prefix=/subscription -for sam: rhsm_username=admin rhsm_password=admin rhsm_hostname=samserv.redhat.com rhsm_port=443 rhsm_prefix=/sam/api
4.restart virt-who service, then check rhsm log and webUI #service virt-who restart	virt-who restart and report mapping normally
5. disable rhsm_hostname option and keep other options avalible, such as: # rhsm_hostname= then restart virt-who service #service virt-who restart	restart virt-who normally, but fail to report mapping with error info: - for stage candlepin: " Communication with subscription manager failed with code 401: Invalid username or password" - for satellite6: "Server error attempting a GET to /rhsm/status/ returned status 404" or "Name or service not known"
6. configure rhsm_hostname value to null and keep other options avalible, such as: rhsm_hostname = then restart virt-who service #service virt-who restart	restart virt-who normally but failed to send mapping with error info: - for stage candlepin: " Communication with subscription manager failed with code 401: Invalid username or password" - for satellite6: "Server error attempting a GET to /rhsm/status/ returned status 404" or "Name or service not known"
7. configure rhsm_hostname to wrong and keep other options avalible, such as: rhsm_hostname = xxx then restart virt-who service #service virt-who restart	restart virt-who normally but fail to send mapping with error: "gaierror: [Errno -2] Name or service not known" ***BZ 1450738, should not show exception info
8. configure rhsm_hostname with https prefix, such as: rhsm_hostname = https://bootp-73-3-218.eng.pek2.redhat.com then restart virt-who service #service virt-who restart	should get and send json info normally. BZ 1404878 existing, but WONTFIX
9. disable rhsm_port option and keep other options avalible, such as: # rhsm_port=	restart virt-who and report mappings normally, due to it will use the "rhsm_port=443" configured in /etc/rhsm/rhsm.conf

then restart virt-who service #service virt-who restart	
10. configure rhsm_port option value to null and keep other options avalible, such as: rhsm_port= then restart virt-who service #service virt-who restart	restart virt-who and report mappings normally, due to it will use the "rhsm_port=443" configured in /etc/rhsm/rhsm.conf
11. configure rhsm_port option value to wrong and keep other options avalible, such as: rhsm_port=442 then restart virt-who service #service virt-who restart	restart virt-who normally, but fail to report mapping with error: "error: [Errno 111] Connection refused" BZ 1450738 existing, should not show exception info
12. disable rhsm_port option and keep other options avalible, such as: # rhsm_prefix= then restart virt-who service #service virt-who restart	- for stage candlepin restart virt-who and report mapping normally, due to it will use the "rhsm_prefix=/subscription" configured in /etc/rhsm/rhsm.conf -for satellite6 restart virt-who normally, but fail to report mapping with error: "Communication with subscription manager failed with code 404:"
13. configure rhsm_port option value to null and keep other options avalible, such as: rhsm_prefix= then restart virt-who service #service virt-who restart	- for stage candlepin restart virt-who and report mapping normally, due to it will use the "rhsm_prefix=/subscription" configured in /etc/rhsm/rhsm.conf -for satellite6 restart virt-who normally, but fail to report mapping with error: "Communication with subscription manager failed with code 404:"
14. configure rhsm_port option value to wrong and keep other options avalible, such as: rhsm_prefix=/xxx then restart virt-who service #service virt-who restart	-for stage candlepin "Server error attempting a GET to /xxx/status/ returned status 404" - for satellite6: "RestlibException" or "NetworkException: Network error code: 400"

RHEL7-87441 - 1054- Check rhsm proxy function under /etc/rhsm/rhsm.conf and /etc/virt-who.d/

Step	Expected Result
***Not for Local_Libvirt, VDSM NOTE: "no_proxy=" option in /etc/rhsm/rhsm.conf can disable rhsm proxy set in /etc/rhsm/rhsm.conf	Refer to BZ 1404878 BZ 1299643

and /etc/virt-who.d/xx.conf "NO_PROXY=" option manually added in /etc/sysconfig/virt-who can disable all proxy set in /etc/rhsm/rhsm.conf, /etc/virt-who.d/xx.conf and /etc/sysconfig/virt-who	
1. create conf file under /etc/virt-who.d/, such as: #vi /etc/virt-who.d/xen.conf [sate-xen] type=xen owner=Default_Organization env=Library server=10.73.5.231 username=root password=red2017	
2. configure rhsm proxy in /etc/rhsm/rhsm.conf # vi /etc/rhsm/rhsm.conf proxy_hostname = bootp-73-3-248.eng.pek2.redhat.com proxy_port = 3128	restart virt-who service and check rhsm log: h/g mapping is OK.
3. configure rhsm proxy to wrong in /etc/rhsm/rhsm.conf # vi /etc/rhsm/rhsm.conf proxy_hostname = xxx.eng.pek2.redhat.com proxy_port = xxx	restart virt-who service and check rhsm log: "Unable to connect to: bootp-73-3-248.eng.pek2.redhat.com:None [Errno -8] Servname not supported for ai_socktype"
4. configure rhsm proxy to wrong with "no_proxy=server_hostname" in /etc/rhsm/rhsm.conf. # vi /etc/rhsm/rhsm.conf proxy_hostname = xxx.eng.pek2.redhat.com proxy_port = xxx no_proxy = subscription.rhsm.stage.redhat.com	restart virt-who service and check rhsm log: h/g mapping is OK.
5. configure rhsm proxy to wrong with "no_proxy=*" in /etc/rhsm/rhsm.conf. # vi /etc/rhsm/rhsm.conf proxy_hostname = xxx.eng.pek2.redhat.com proxy_port = xxx no_proxy = *	restart virt-who service and check rhsm log: h/g mapping is OK.
6. configure rhsm proxy to wrong in /etc/rhsm/rhsm.conf and "NO_PROXY=server_hostname" in /etc/sysconfig/virt-who # vi /etc/rhsm/rhsm.conf proxy_hostname = xxx.eng.pek2.redhat.com proxy_port = xxx # vi /etc/sysconfig/virt-who NO_PROXY=subscription.rhsm.stage.redhat.com	restart virt-who service and check rhsm log: h/g mapping is OK.

7. configure rhsm proxy to wrong in /etc/rhsm/rhsm.conf and "NO_PROXY=*" in /etc/sysconfig/virt-who # vi /etc/rhsm/rhsm.conf proxy_hostname = xxx.eng.pek2.redhat.com proxy_port = xxx # vi /etc/sysconfig/virt-who NO_PROXY=*	restart virt-who service and check rhsm log: h/g mapping is OK.
8. remove all proxy setting under /etc/rhsm/rhsm.conf, and add rhsm proxy to /etc/virt-who.d/xx.conf # vi /etc/virt-who.d/xen.conf rhsm_proxy_hostname = bootp-73-3-248.eng.pek2.redhat.com rhsm_proxy_port = 3128	restart virt-who service and check rhsm log: h/g mapping is OK.
9. configure rhsm proxy to wrong in /etc/virt-who.d/xx.conf # vi /etc/virt-who.d/xen.conf rhsm_proxy_hostname = xxx.eng.pek2.redhat.com rhsm_proxy_port = xxx	restart virt-who service and check rhsm log: [Errno -8] Servname not supported for ai_socktype
10. configure rhsm proxy to wrong in /etc/virt-who.d/xx.conf and "no_proxy=server_hostname" in /etc/rhsm/rhsm.conf # vi /etc/rhsm/rhsm.conf no_proxy = subscription.rhsm.stage.redhat.com # vi /etc/virt-who.d/xen.conf rhsm_proxy_hostname = xxx.eng.pek2.redhat.com rhsm_proxy_port = xxx	restart virt-who service and check rhsm log: h/g json info can be fetched and sent normally.
11. configure rhsm proxy to wrong in /etc/virt-who.d/xen.conf and "no_proxy=*" in /etc/rhsm/rhsm.conf # vi /etc/rhsm/rhsm.conf no_proxy = * # vi /etc/virt-who.d/xen.conf rhsm_proxy_hostname = xxx.eng.pek2.redhat.com rhsm_proxy_port = xxx	restart virt-who service and check rhsm log: h/g mapping is OK.
12. configure rhsm proxy to wrong in /etc/virt-who.d/xx.conf with "NO_PROXY=server_hostname" in /etc/sysconfig/virt-who # vi /etc/sysconfig/virt-who NO_PROXY=subscription.rhsm.stage.redhat.com # vi /etc/virt-who.d/xen.conf rhsm_proxy_hostname	restart virt-who service and check rhsm log: h/g mapping is OK.

=xxx.eng.pek2.redhat.com rhsm_proxy_port = xxx	
13. configure rhsm proxy to wrong in /etc/virt-who.d/xxconf with "NO_PROXY=*" in /etc/sysconfig/virt-who # vi /etc/sysconfig/virt-who NO_PROXY=* # vi /etc/virt-who.d/xen.conf rhsm_proxy_hostname = xxx.eng.pek2.redhat.com rhsm_proxy_port = xxx	restart virt-who service and check rhsm log: h/g mapping is OK.

RHEL7-79919 - 1055-[Satellite] - Check virt-who can send mapping info to multi-org

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1408935 BZ 1415025 BZ 1408792
1. Configure a new org in satellite(eg:BJ_OG_LB). Open satellite webUI, go to Default Organization-->Manage organization-->New organization	
2. Unregister virt-who host # subscription-manager unregister	
3. Configure virt-who run at any mode with "owner=Default_Organization" such as: # /etc/virt-who.d/hyperv.conf [test-hyperv1] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=Default_Organization env=Library rhsm_hostname=bootp-73-3-167.eng.pek2.redhat.com rhsm_port=443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin	With rhsm options configured, virt-who can send hypervisor to the defined org successfully.
4. Restart virt-who service and check rhsm.log	virt-who should fetch and send the hosts/guests info to server normally.
5. Check satellite WebUI	hypervisors just can show on "Default

	organization-->Hosts-->Content hosts"
6. Unregister/delete hypervisor registered above from webui, then configure virt-who run at any mode with "owner=BJ_OG_LB" and "owner=Default_Organization" such as: # /etc/virt-who.d/hyperv.conf [test-hyperv1] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=Default_Organization env=Library rhsm_hostname=bootp-73-3-167.eng.pek2.redhat.com rhsm_port=443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin [test-hyperv2] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=BJ_OG_LB env=Library rhsm_hostname=bootp-73-3-167.eng.pek2.redhat.com rhsm_port=443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin	Configure the same hypervisor mode to different orgs in the same server successfully.
7. Restart virt-who service and check rhsm.log	virt-who should fetch and send the hosts/guests mapping to the defined server successfully.
8. Check satellite webUI, go to "Default organization-->BJ_OG_LB-->Hosts-->Content hosts"	hypervisors can show on both "Default organization-->BJ_OG_LB-->Hosts-->Content

	hosts" and "Default organization-->Hosts-->Content hosts"

RHEL7-53840 - 1056-Check filter_hosts option in /etc/virt-who.d config file

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1259295 BZ 1318915 BZ 1359653 BZ 1401420 BZ 1445579
1. filter_hosts options can be used for (remote libvirt, hypervisor, esx, xen, hyperv), but if (vcenter, rhevm, xencenter) is configured, this options become more useful for two or more hosts. filter_hosts: Only hosts which uuid (or hostname or hwuuid, based on hypervisor_id) is specified in comma-separated list in this option will be reported. filter_host_uuids is deprecated alias for this option.	- for esx/xen/rhevm mode, should add two or more hosts to these vm managers. -for remote libvirt/hyperv mode, only one hypervisor to filter and exclude.
2. create a config file in /etc/virt-who.d, and add filter_host_uuids option with host_uuid value to filter host, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library filter_hosts="aee4ff00-8c33-11e2-994a-6c3be51d959a"	
3. restart virt-who service and check the rhsm.log	virt-who only send "aee4ff00-8c33-11e2-994a-6c3be51d959a" to Sam/Satellite/Stage Candlepin, other host_uuid will skip
4. set a NULL value to filter_host_uuids and check again, such as: filter_hosts="" filter_hosts='' filter_hosts=	virt-who will skip all the host_uuid and give "0 hypervisors and 0 guests found" mapping to rhsm log
5. use different quotes for split, such as: 1). double quote: filter_hosts="aee4ff00-8c33-11e2-994a-6c3be51d959a", "86b2bd00-8bad-11e2-87f4-6c3be514699d" 2). single quote: filter_hosts='aee4ff00-8c33-11e2-994a-6c3be51d959a', '86b2bd00-8bad-11e2-87f4-6c3be514699d'	virt-who will send the host_uuid according to filter_hosts value even though different quotes or separator, skip other host_uuid

3). blank space between uuids filter_hosts='aee4ff00-8c33-11e2-994a-6c3be51d959a', '86b2bd00-8bad-11e2-87f4-6c3be514699d' 4). blank space before comma filter_hosts='aee4ff00-8c33-11e2-994a-6c3be51d959a' ,'86b2bd00-8bad-11e2-87f4-6c3be514699d' 5). with different quote: filter_hosts='aee4ff00-8c33-11e2-994a-6c3be51d959a', "86b2bd00-8bad-11e2-87f4-6c3be514699d"	

RHEL7-53841 - 1057-Check exclude_hosts option in /etc/virt-who.d config file

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1318915 BZ 1359653 BZ 1401420
1. exclude_hosts options can be used for (remode_libvirt, rhevm, esx, hyper-v, xen), but if (vcenter, rhevm, xencenter) is configured, this options become more useful for two or more hosts. exclude_hosts: Hosts which uuid (or hostname or hwuuid, based on hypervisor_id) is specified in comma-separated list in this option will NOT be reported. exclude_host_uuids is deprecated alias for this option.	- for esx/xen/rhevm mode, should add two or more hosts to these vm managers. -for remote libvirt/hyperv mode, only one hypervisor to filter and exclude.
2. create a config file in /etc/virt-who.d, and add exclude_hosts with host_uuid value to filter host, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library exclude_hosts="aee4ff00-8c33-11e2-994a-6c3be51d959a"	
3. restart virt-who service and check the rhsm.log	virt-who will send all host/guest mapping info except "aee4ff00-8c33-11e2-994a-6c3be51d959a" to SAM/Satellite/Stage candlepin
4. set a NULL value to exclude_host_uuids and check again, such as: exclude_hosts="" exclude_hosts=" exclude_hosts=	virt-who will send all host/guest mapping info to SAM/Satellite/Stage candlepin
5. use different quotes for split, such as: 1). double quote: exclude_hosts="aee4ff00-8c33-11e2-994a-6c3be51d959a", "86b2bd00-8bad-11e2-87f4-6c3be514699d"	virt-who will send all host/guest mapping info except "aee4ff00-8c33-11e2-994a-6c3be51d959a" and

2). single quote: exclude_hosts='aee4ff00-8c33-11e2-994a-6c3be51d959a', '86b2bd00-8bad-11e2-87f4-6c3be514699d' 3). blank space between uuids exclude_hosts='aee4ff00-8c33-11e2-994a-6c3be51d959a', '86b2bd00-8bad-11e2-87f4-6c3be514699d' 4). blank space before comma exclude_hosts='aee4ff00-8c33-11e2-994a-6c3be51d959a' ,'86b2bd00-8bad-11e2-87f4-6c3be514699d' 5). with different quote: exclude_hosts='aee4ff00-8c33-11e2-994a-6c3be51d959a' ,"86b2bd00-8bad-11e2-87f4-6c3be514699d"	'86b2bd00-8bad-11e2-87f4-6c3be514699d' to SAM/Satellite/Stage candlepin if excluded all hypervisor, virt-who should give "0 hypervisors and 0 guests found" mapping to rhsm log

RHEL7-53842 - 1058-[ESX] Check filter_host_parents option in /etc/virt-who.d config file

Step	Expected Result
***Only for ESX NOTE: please add two or more hosts to these vm managers	refer to BZ 1445579
1. create a config file in /etc/virt-who.d, and add filter_host_parents with domain_id value to filter host, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library filter_host_parents="domain-s98"	
2. restart virt-who service and check the rhsm.log	virt-who only send host/guest mapping info "domain-s98" to SAM/Satellite/Stage server
3. set a NULL value to filter_host_parents and check again, such as: filter_host_parents="" filter_host_parents='' filter_host_parents=	virt-who will skip all the hosts and give "0 hypervisors and 0 guests found" mapping to rhsm log
4. set two or more value to filter_host_parents, use different quotes for split, such as: 1). double quote: filter_host_parents="domain-s98","domain-c122" 2). single quote: filter_host_parents='domain-s98','domain-c122'	virt-who will send the hosts according to filter_host_parents value even though different quotes or separator, skip other hosts

3). blank space between uuids filter_host_parents="domain-s98", "domain-c122" 4). blank space before comma filter_host_parents="domain-s98" , "domain-c122" 5). with different quote: filter_host_parents="domain-s98" , 'domain-c122'	

RHEL7-53843 - 1059-[ESX] Check exclude_host_parents option in /etc/virt-who.d config file

Step	Expected Result
***Only for ESX NOTE: please add two or more hosts to these vm managers	refer to BZ 1445579
1. create a config file in /etc/virt-who.d, and add exclude_host_parents with domain_id value to filter host, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library	
2. restart virt-who service and check the rhsm.log	virt-who will send all host/guest mapping info except "domain-s98" to SAM/Satellite/Stage candlepin
3. set a NULL value to exclude_host_parents and check again, such as: exclude_host_parents="" exclude_host_parents=" exclude_host_parents=	virt-who will send all host/guest mapping info to SAM/Satellite/Stage candlepin
4. set two or more value to exclude_host_parents, use different quotes for split, such as: 1). double quote: exclude_host_parents="domain-s98", "domain-c122" 2). single quote: exclude_host_parents='domain-s98', 'domain-c122' 3). blank space between uuids	virt-who will send all host/guest mapping info except "domain-s98" and "domain-c122" to SAM/Satellite/Stage candlepin if excluded all hypervisor, virt-who should give "0 hypervisors and 0 guests found" mapping to rhsm log

exclude_host_parents="domain-s98", "domain-c122" 4). blank space before comma exclude_host_parents="domain-s98" , "domain-c122" 5). with different quote: exclude_host_parents='domain-s98', "domain-c122"	

RHEL7-53844 - 1060-Check filter_hosts and exclude_hosts together in /etc/virt-who.d config file.

Step	Expected Result
***Not for Local_Livirt, VDSM NOTE: - for esx/xen/rhevm mode, should add two or more hosts to these vm managers. -for remote libvirt/hyperv mode, only one hypervisor to filter and exclude.	
1. create a config file in /etc/virt-who.d, and add filter_hosts and exclude_hostts to filter host, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library filter_hosts="aee4ff00-8c33-11e2-994a-6c3be51d959a", "86b2bd00-8bad-11e2-87f4-6c3be514699d" exclude_hosts= "86b2bd00-8bad 11e2-87f4-6c3be514699d"	
2. restart virt-who service and check the rhsm.log	will only send hosts on aee4ff00-8c33-11e2-994a-6c3be51d959a to SAM/Satelliter/Stage, will skip "86b2bd00-8bad-11e2-87f4-6c3be514699d"

RHEL7-53845 - 1061-[ESX] Check filter_host_parents and exclude_host_parents together in /etc/virt-who.d config file

Step	Expected Result
***Only for ESX NOTE: please add two or more hosts to these vm managers	

1. create a config file in /etc/virt-who.d, and add filter_host_uuids and exclude_host_parents to filter host, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library filter_host_parents="domain-s32","domain-s72" exclude_host_parents= "domain-s32"	
2. restart virt-who service and check the rhsm.log	will only send hosts on domain-s72 to SAM/Satelliter/Stage, will skip domain-s32

RHEL7-53846 - 1062-[ESX] Check filter_hosts and exclude_host_parents together in /etc/virt-who.d config file

Step	Expected Result
***Only for ESX NOTE: please add two or more hosts to these vm managers	
1. create a config file in /etc/virt-who.d, and add filter_hosts and exclude_host_parents to filter host, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library filter_hosts="aee4ff00-8c33-11e2-994a-6c3be51d959a","86b2bd00-8bad-11e2-87f4-6c3be514699d" exclude_host_parents= "domain-s32"	
2. restart virt-who service and check the rhsm.log	will only send hosts on domain-s72 to SAM/Satelliter/Stage, will skip domain-s32

RHEL7-53847 - 1063-[ESX] Check filter_host_parents and exclude_hosts together in /etc/virt-who.d config file

Step	Expected Result
***Only for ESX NOTE: please add two or more hosts to these vm managers	
1. create a config file in /etc/virt-who.d, and add exclude_hosts and filter_host_parents to filter host, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library filter_host_parents= "domain-s32","domain-s72" exclude_hosts="aee4ff00-8c33-11e2-994a-6c3be51d959a"	
2. restart virt-who service and check the rhsm.log	will only send hosts "86b2bd00-8bad-11e2-87f4-6c3be514699d" to SAM/Satelliter/Stage will skip" aee4ff00-8c33-11e2-994a-6c3be51d959a "

RHEL7-53848 - 1064-[ESX] Check simplified_vim option in /etc/virt-who.d config file

Step	Expected Result
***Only for ESX	Refer to BZ 1339419
1. create a esx config file and config simplified_vim to "false" in /etc/virt-who.d, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.2.15 username=Administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967 simplified_vim=false	
2. restart virt-who service and check rhsm.log	virt-who by default uses stripped-down version of vimService.wsdl file that contains vSphere SOAP API definition. Set this option to false to use server provided wsdl file that will be retrieved automatically.
3. create a esx config file and config	

simplified_vim to "true" in /etc/virt-who.d, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.2.15 username=Administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967 simplified_vim=true	
4. restart virt-who service and check rhsm.log	virt-who can send mapping info to server. it shouldn't show any error info in rhsm.log.

RHEL7-53849 - 1065-Check hypervisor_id option in /etc/virt-who.d config file

Step	Expected Result
***not for Local_Libvirt, VDSM NOTE: hypervisor_id: Property that should be used as identification of the hypervisor. Can be one of following: uuid, hostname, hwuuid.	Refer to BZ 1233074 BZ 1315547 BZ 1367287 BZ 1401420 BZ 1437229 BZ 1458125
1. create a config file and set hypervisor_id to uuid, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.2.15 username=Administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967 hypervisor_id=uuid	
2. restrat virt-who, check rhsm.log and server webui.	1) for stage candlepin, satellite6.3.x: - rhsm log should show hypervisor details with uuid, like below showing, but still send hostname to server webui: "hypervisorId": { "hypervisorId": "8e2d4136-3a06-41a1-9c84-aee6ecf103ad" }, "name": "xenmaster", "guestIds": [{ "guestId": "0565daea-bcbb-

	bf1c-03a5-df2bd3bd7f34", "state": 1, "attributes": { "active": 1, "virtWhoType": "xen" } }], "facts": { "hypervisor.type": "XenServer", "cpu.cpu_socket(s)": "2", "hypervisor.version": "7.1.0" } 2) for satellite6.1, satellite6.2 and sam - rhsm log shows uuid without hypervisor's detail info, just show guest info, like below showing, and can send uuid to server webui: "0eb6c08a-596a-473a-9fbd-e5aca3f8538a": [{ "guestId": "bb59d0d9-0f3c-4809-8401-dd041cc22746", "state": 1, "attributes": { "active": 1, "virtWhoType": "rhevm" } }],
3. set hypervisor_id to hostname, such as: hypervisor_id=hostname	
4. restrat virt-who, check rhsm.log and server webui.	1). for stage candlepin, satellite6.3.x: - rhsm log should show hypervisor detail facts info with hostname, like below showing, and send hostname to server webui: { "hypervisorId": { "hypervisorId": "xenmaster" }, "name": "xenmaster", "guestIds": [{ "guestId": "0565daea-bcbb-bf1c-03a5-df2bd3bd7f34", "state": 1, "attributes": { "active": 1, "virtWhoType": "xen" } }

	], "facts": { "hypervisor.type": "XenServer", "cpu.cpu_socket(s)": "2", "hypervisor.version": "7.1.0" } }, 2). for satellite6.1, satellite6.2 and sam - rhsm log shows hostname without hypervisor's detail facts info, just show guest info, like below showing, and send hostname to server webui: "10.66.144.11": [{ "guestId": "bb59d0d9-0f3c-4809-8401-dd041cc22746", "state": 1, "attributes": { "active": 1, "virtWhoType": "rhevm" } } **NOTE: virt-who should send the hypervisor hostname, not the define name in RHEVM/vCenter/Xencenter** ***BZ 1389729 existing for rhevm, not use hostname (CLOSED) ***Bug 1408782 existing for satellite6.2, should keep only one hypervisor in webui ***Bug 1520807 existing for stage candlepin
5. set hypervisor_id to hwuuid, such as: hypervisor_id=hwuuid	hwuuid just for esx and rhevm mode, but need to test with other hypervisors to check if the log is normall.
6. restrat virt-who, check rhsm.log and server webui.	***for rhevm/esx 1) for stage candlepin, satellite6.3.x: - rhsm log should show hypervisor detail facts info with hwuuid, like below showing, and still send hostname to server webui: { "hypervisorId": { "hypervisorId": "host-83" }, "name": "bootp-73-5-206", "guestIds": [{ "guestId": "421c583c-5d6a-79e4-d50b-22db99686f6b", "state": 1, "attributes": {

	"active": 1, "virtWhoType": "esx" } },], "facts": { "hypervisor.type": "VMware ESXi", "cpu.cpu_socket(s)": "2", "hypervisor.version": "6.5.0" } }, 2) for satellite6.1, satellite6.2 and sam - rhsm log shows uuid without hypervisor's detail facts info, just show guest info, like below showing, and send uuid to server webui: "456BDE80-8BA8-11E2BD4C10604B88F13F": [{ "guestId": "bb59d0d9-0f3c-4809-8401-dd041cc22746", "state": 1, "attributes": { "active": 1, "virtWhoType": "rhevm" } }] ***for remote_libvirt/hyperv/xen mode, the error should be as following : "Thread 'stage-libvirt' fails with error: Invalid option hwuuid for hypervisor_id, use one of: uuid, or hostname" should no error - "NameError: global name 'virt' is not defined" ***Bug 1408782 existing for satellite6.2, should keep only one hypervisor in webui ***Bug 1520807 existing for stage candlepin

RHEL7-79884 - 1066-Check hostname show correct when hostname is not with domain name

Step	Expected Result
***Only for ESX and Remote Libvirt	Refer to BZ 1361434 BZ 1361445
1. configure host's name to without domain name in KVM/XEN/HYPERV/ESX/RHEVM	

eg: "bootp-73-5-222" not "bootp-73-5-222.redhat.com"	
2. create a config file and set hypervisor_id to hostname, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.2.15 username=Administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967 hypervisor_id=hostname	
3. restart virt-who service and check hostname in rhsm.log,	hostname shouldn't with extra "." at the end of hostname. eg "bootp-73-5-222.". The hostname should be "bootp-73-5-222". "bootp-73-5-222": [{ "guestId": "42098426-0d49-7dc6-0cb7-2331f149b8aa", "state": 1, "attributes": { "active": 1, "virtWhoType": "esx", "hypervisorType": "vmware" } }]

RHEL7-53850 - 1067-Check hypervisor_id and filter_hosts option in /etc/virt-who.d config file

Step	Expected Result
***hypervisor_id=uuid/hostname, not for Local_Libvirt, VDSM ***hypervisor_id=hwuuid, only for ESX and RHEVM.	Refer to BZ 1272149
1. this case is only for vcenter /rhevm/scvmm(hyperv-manager), please add two or more hosts to these vm managers, such as: 1). domain-s32 with host1 aee4ff00-8c33-11e2-994a-6c3be51d959a 2). domain-s72 with host2 86b2bd00-8bad 11e2-87f4-6c3be514699d	
2. create a config file and set hypervisor_id to uuid	restart virt-who and check rhsm.log, it

and filter_hosts, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.2.15 username=Administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967 hypervisor_id=uuid filter_hosts="aee4ff00-8c33-11e2-994a-6c3be51d959a"	should show json with uuid, but only send "aee4ff00-8c33-11e2-994a-6c3be51d959a" json info
3. set hypervisor_id to hostname and filter_hosts, such as: hypervisor_id=hostname filter_hosts="bootp-73-5-248.rhts.eng.pek2.redhat.com"	restart virt-who and check rhsm.log, it should show the json info with hostname, but only send hostname "bootp-73-5-248.rhts.eng.pek2.redhat.com"
4. set hypervisor_id to hwuuid and filter_hosts,such as: hypervisor_id=hwuuid filter_hosts="host-53"	restart virt-who and check rhsm.log, it should show the json info with hwuuid but only send hwuuid "host-53"

RHEL7-53851 - 1068-Check hypervisor_id and exclude_hosts option in /etc/virt-who.d config file

Step	Expected Result
***hypervisor_id=uuid/hostname, not for Local_Libvirt, VDSM ***hypervisor_id=hwuuid, only for ESX and RHEVM.	
1. this case is only for vcenter /rhevm/scvmm(hyperv-manager), please add two or more hosts to these vm managers, such as: 1). domain-s32 with host1 aee4ff00-8c33-11e2-994a-6c3be51d959a 2). domain-s72 with host2 86b2bd00-8bad 11e2-87f4-6c3be514699d	
2. create a config file and set hypervisor_id to uuid, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.2.15 username=Administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967 hypervisor_id=uuid exclude_hosts="aee4ff00-8c33-11e2-994a-6c3be51d959a"	restart virt-who and check rhsm.log, it should show the json with uuid, but will skip "aee4ff00-8c33-11e2-994a-6c3be51d959a"
3. set hypervisor_id to hostname and exclude_hosts, such as:	restart virt-who and check rhsm.log, it should show the json with hostname ,

hypervisor_id=hostname exclude_hosts=bootp-73-5-248.rhts.eng.pek2.redhat.com"	but will skip hostname "bootp-73-5-248.rhts.eng.pek2.redhat.com"
4. set hypervisor_id to hwuuid and exclude_hosts, such as: hypervisor_id=hwuuid exclude_hosts="host-53"	restart virt-who and check rhsm.log, it should show the json with hwuuid , but will skip hwuuid "host-53"

RHEL7-87349 - 1069-Check filter and exclude ability for hypervisor_id=uuid/hostname/hwuuid using wildcard

Step	Expected Result
***not for Local_Libvirt, VDSM	Refer to BZ 1405967 BZ 1405967
1. create a config file and set hypervisor_id to hostname, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.3.222 username=Administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967 hypervisor_id=hostname	restart virt-who and check rhsm.log, it should show the json with hostname: { "host236": [], "bootp-73-5-210.rhts.eng.pek2.redhat.com": [] "host206": [], "bootp-73-5-232.rhts.eng.pek2.redhat.com": [] }
2. set filter_hosts with hypervisor_id=hostname, such as: hypervisor_id=hostname filter_hosts="bootp-73-5-210.rhts.eng.pek2.redhat.com", "bootp-73-5-232.rhts.eng.pek2.redhat.com"	restart virt-who and check rhsm.log, it should filter and show the json with hostname: { "bootp-73-5-210.rhts.eng.pek2.redhat.com": [] "bootp-73-5-232.rhts.eng.pek2.redhat.com": [] }
3. set filter_hosts using ending wildcard with hypervisor_id=hostname, such as: hypervisor_id=hostname filter_hosts=bootp*	restart virt-who and check rhsm.log, it should filter all the hostname begining with "bootp" { "bootp-73-5-210.rhts.eng.pek2.redhat.com": [] "bootp-73-5-232.rhts.eng.pek2.redhat.com": [] }
4. set filter_hosts using beginning wildcard with	restart virt-who and check rhsm.log, it

hypervisor_id=hostname, such as: hypervisor_id=hostname filter_hosts=*.redhat.com	should filter all the hostname ending with "redhat.com" { "bootp-73-5-210.rhts.eng.pek2.redhat.com": [] "bootp-73-5-232.rhts.eng.pek2.redhat.com": [] }
5. set filter_hosts using middle wildcard with hypervisor_id=hostname, such as: hypervisor_id=hostname filter_hosts=bootp*redhat.com	restart virt-who and check rhsm.log, it should filter all the hostname with "redhat.com" { "bootp-73-5-210.rhts.eng.pek2.redhat.com": [] "bootp-73-5-232.rhts.eng.pek2.redhat.com": [] }
6. set exclude_hosts using wildcard with hypervior_id=hostname. the steps refer to step3-5	can use wildcard to exclude hostname.
7. set exclude_hosts and filter_hosts using wildcard together to filter hosts, such as: filter_hosts=bootp* exclude_hosts=bootp-73-5-2*	can only filter the "bootp-73-5-232.rhts.eng.pek2.redhat.com": []
8. change hypervisor_id to uuid and restart virt-who.	it will show all the Host-to-guest mapping: { "9fea4d56-5ed5-ddfe-b806-e7872726c0d7": [], "44924d56-c187-17c7-f4e8-7ef45e796d8b": [], "33744d56-dd96-0722-fea2-2038132de72d": [] }
9. set filter_hosts using wildcard with hypervisor_id=uuid, such as: hypervisor_id=uuid filter_hosts=9fea4d56*	restart virt-who and check rhsm.log, it should filter the host, which uuid begin with '9fea4d56'. { "9fea4d56-5ed5-ddfe-b806-e7872726c0d7": [] }
10. set exclude_hosts using wildcard with hypervisor_id=uuid, such as: hypervisor_id=uuid exclude_hosts=*e7872726c0d7	restart virt-who and check rhsm.log, it should exclude the host, which uuid end with 'e7872726c0d7'. { "44924d56-c187-17c7-f4e8-7ef45e796d8b": [],

	"33744d56-dd96-0722-fea2-2038132de72d": [] }
11. change hypervisor_id to hwuuid, and check the filter and exclude function with wildcard, refer to step8-10.	the hwuuid also will support wildcard Note: hwuuid just for ESX, RHEVM

RHEL7-79916 - 1070-[Satellite] - Check virt-who support multi-org

Step	Expected Result
***Not for Local_Libvirt, VDSM	
1. Configure a new org in satellite(eg:BJ_OG_LB). Open satellite webUI, go to Default Organization-->Manage organization-->New organization	
2. Register virt-who host to satellite with default org (Default_Organization) # subscription-manager register --username=admin --password=admin --org=Default_Organization	
3. Configure virt-who run at any mode with "owner=Default_Organization" such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=Default_Organization env=Library	without rhsm options configured, virt-who will register the hypervisor to the org same with virt-who host.
4. Restart virt-who service and check rhsm.log	mapping is OK with which org the host-to-guests mapping is pointing, such as: Host-to-guest mapping being sent to 'Default_Organization':
5. Open satellite webUI, go to "Default organization-->Hosts-->Content hosts"	hypervisors can show on content hosts page
6. Open satellite webUI, go to "Default organization-->BJ_OG_LB-->Hosts-->Content hosts"	hypervisors can't show on content hosts page
7. Unregister virt-who host on terminal side # subscription-manager unregister	

8. Open satellite webUI, go to "Default organization-->Hosts-->Content hosts-->[physical host]", delete this host.	delete host successfully. skip the step, ilf do the opration on Satellite WebUI -> "Administer" -> "Settings" -> "Katello" -> "unregister_delete_host" -> set to "True".
9. Register virt-who host to satellite's another org BJ_OG_LB # subscription-manager register --username=admin --password=admin --org=BJ_OG_LB	
10. Update virt-who run at any mode with "owner=BJ_OG_LB" such as: # /etc/virt-who.d/hyperv.conf [test-hyperv] type=hyperv server=10.66.128.9 username=Administrator password=qwer1234P owner=BJ_OG_LB env=Library	
11. Restart virt-who service and check rhsm.log	mapping is OK with which org the host-to-guests mapping is pointing, such as: Host-to-guest mapping being sent to 'BJ_OG_LB':
12. Open satellite webUI, go to "Default organization-->BJ_OG_LB-->Hosts-->Content hosts"	hypervisors can show on content hosts page
13. Open satellite webUI, go to "Default organization-->Hosts-->Content hosts"	hypervisors can't show on content hosts page

RHEL7-53852 - 1071-Check fake mode for single hypervisor in /etc/virt-who.d config file

Step	Expected Result
***For all hypervisor	Refer to BZ 1259038
1. stop virt-who service	
2. run virt-who with -p to create the json data - if local libvirt mode: # virt-who -p -d > /tmp/fake.json	

- if vdsm mode: # virt-who --vdsm -p -d > /tmp/fake.json - if other remote hypervisor mode, need to define by yourself, such as: virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.73.2.15 --esx-username=Administrator@vsphere.local --esx-	
3. create a fake config file in /etc/virt-who.d with is_hypervisor=Ture, such as: [fake-virt] type=fake file=/tmp/fake.json is_hypervisor=True owner=7661967 env=7661967	is_hypervisor=True (default) works for hypervisor(remote_kvm/esx/xen/rhevm/hyperv)
4. restart virt-who service and check rhsm.log	- if vdsm/local_kvm mode, virt-who should fail to run the hypervisor with error: Thread 'fake-virt' fails with error: Fake virt file '/tmp/fake.json' is not properly formed: 'uuid' - if remote_kvm/esx/xen/rhevm/hyperv, virt-who shold succeed to send the mapping info according to the file "/tmp/fake.json" normally. ***Bug 1360530 exists for satellite5
5. create a fake config file in /etc/virt-who.d with is_hypervisor=False, such as: [fake-virt] type=fake file=/tmp/fake.json is_hypervisor=False owner=7661967 env=7661967	is_hypervisor=False works for local mode(local_kvm, vdsm)
6. restart virt-who service and check rhsm.log	- if vdsm/local_kvm mode, virt-who should succeed to send the mapping info according to the file "/tmp/fake.json" normally. - if remote_kvm/esx/xen/rhevm/hyperv,virt-who will fail to run the fake conf with error: Fake virt file '/tmp/fake.json' is not properly formed: uuid key shouldn't be present, try to check is_hypervisor value

RHEL7-53853 - 1072-Check fake mode, host and guest can subscirbe normally

Step	Expected Result
***For all hypervisor	

1. register host and guest to Sam/Satellite/Stage	
2. create the host/guests associations file, such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.73.2.15 --esx-username=Administrator@vsphere.local --esx-password=Welcome1! -p -d > /tmp/fake.json	the offline file can be created by -p option
3. create a fake config file in /etc/virt-who.d, such as: [fake-virt] type=fake file=/tmp/fake.json is_hypervisor=True owner=7661967 env=7661967	if is_hypervisor true (default), means the fake mode is running for hypervisor; if is_hypervisor false, means the fake mode is running for local libvirt mode;
4. restart virt-who service and check rhsm.log	virt-who can send the mapping info according to the file "/tmp/fake.json" normally
5. subscribe host to a physical pool subscribe guest to the bonus pool	the host and guest can be subscribed normally

RHEL7-53854 - 1073-Check fake mode, guest consumed bonus pool revoke after unregister host

Step	Expected Result
***For all hypervisor	
1. register host and guest to Sam/Satellite/Stage	
2. create the host/guests associations file, such as: # virt-who --esx --esx-owner=7661967 --esx-env=7661967 --esx-server=10.73.2.15 --esx-username=Administrator@vsphere.local --esx-password=Welcome1! -p -d > /tmp/fake.json	the offline file can be created by -p option
3. create a fake config file in /etc/virt-who.d, such as: [fake-virt] type=fake file=/tmp/fake.json is_hypervisor=True owner=7661967	if is_hypervisor true (default), means the fake mode is running for hypervisor; if is_hypervisor false, means the fake mode is running for local libvirt mode;

env=7661967	
4. restart virt-who service and check rhsm.log	virt-who can send the mapping info according to the file "/tmp/fake.json" normally
5. subscribe host to a physical pool subscribe guest to the bonus pool	the host and guest can be subscribed normally
6. check consumed bonus on guest # subscription-manager list --co	the consumed pool should be listed
7. unregister host from server	
8. refresh and check the consumed bonus pool on guest # subscription-manager refresh # subscription-manager list --co	the consumed pool should be revoked

RHEL7-53855 - 1074-Check fake mode for multiple hypervisors in /etc/virt-who.d config file

Step	Expected Result
***Not for Local_Libvirt, VDSM	
1. config two different hypervisors in /etc/sysconfig/virt-who or /etc/virt-who.d/, for example: # vi /etc/virt-who.d/libvirt.conf [test-libvirt] type=libvirt server=10.66.129.60 username=root password=redhat owner=7661967 env=7661967 # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.5 username=Administrator@vsphere.local password=qwer1234P! owner=7661967 env=7661967	
2. run virt-who with -p option to create the fake json, such as: # virt-who -p -d > /tmp/fake.json	
3. disable or remove the above config from /etc/sysconfig/virt-who or /etc/virt-who.d/, and then create a fake config file in /etc/virt-who.d, such as: [fake-virt]	if is_hypervisor true (default), means the fake mode is running for hypervisor; if is_hypervisor false, means the fake mode is running for local libvirt mode;

type=fake file=/tmp/fake.json is_hypervisor=True owner=7661967 env=7661967	
3. restart virt-who service and check rhsm.log	virt-who can send the mapping info according to the file "/tmp/fake.json" including all the hypervisors normall.

RHEL7-53857 - 1075-Check virt-who log and thread normally after unregister/re-register system

Step	Expected Result
***For all hypervisor	Refer to BZ 1216278 BZ 1293821 BZ 1362351 BZ 1400788
1 Configure virt-who run at any mode	
2 Register system to server and check virt-who's log. # tail -f /var/log/rhsm/rhsm.log # subscription-manager register --username=xxx --password=xxx	System has been registered successfully. No exception or error info found in the log
3 Unregister system and check virt-who's log. # tail -f /var/log/rhsm/rhsm.log # subscription-manager unregister	System has been unregistered successfully. No exception info found in the log. Eg: "BadStatusLine" or "error: [Errno 4] Interrupted system call" Within one interval time, it should show system has been registered info in the log. "Unable to read certificate, system is not registered or you are not root"
4. Check virt-who's status and thread # service virt-who status # ps -ef|grep virt-who	Virt-who is still running. Still only one virt-who thread (PPID = 1) is exist.

RHEL7-79893 - 1076-Check virt-who log and thread normally if virt-who run in abnormal

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1339863
1 Configure virt-who run at any mode and make sure the vcenter/hyperv/rhevm/xen/rhel can't reacheable	
2 Restart virt-who service and check virt-	Virt-who run restart successfully, but it

who's log # service virt-who restart && tail -f /var/log/rhsm/rhsm.log	hasn't get any response from vcenter/hyperv/rhevm/xen/rhel.
3 Restart virt-who service and check virt-who's log again	Virt-who run restart successfully. It shouldn't show error info as the following: "Interrupted system call"
4. Check virt-who's status and thread # service virt-who status # ps -ef|grep virt-who	Virt-who is still running. It should show only one virt-who threads (PID=1).

RHEL7-79902 - 1077-[Satellite5.X] Check virt-who log normally after delete profiles in /var/lib/virt-who

Step	Expected Result
***Only for satellite5.X server	Refer to BZ 1311962 BZ 1410317
1. Register system to server	
2. Configure virt-who run at any mode, restart virt-who service	virt-who send host/guest mapping info to server
3. Monitor profile which generate by virt-who. # cat /var/lib/virt-who	It will show hypervisor-systemid-[uuid] as the following: [root@hp-z220-03 virt-who]# ls hypervisor-systemid-bootp-73-5-222.rhts.eng.pek2.redhat.com hypervisor-systemid-2ea93fc2-4e47-4c14-9e83-6ceeb8d2f5d4
4. Delete all profiles # rm -rf /var/lib/virt-who/*	
5. Restart virt-who service and check virt-who's log	Virt-who restart successfully. Virt-who send host/guest mapping to service and it won't generate any error info in the log.
6. Check profiles # cat /var/lib/virt-who/	It will generate new hypervisor-systemid-[hostuuid], and [hostuuid] is the same as it on rhsm.log.
7. Check server webui	It should update the hypervisor uuid based on the original one, should not generate another same hypervisor on WebUI.

RHEL7-53858 - 1078-[WEBUI] Check virt-who log normally after delete host/hypervisor in server webUI

Step	Expected Result
***For all hypervisor	Refer to BZ 1284037 BZ 1325765
1. Register system to server	
2. Configure virt-who run at any mode, restart virt-who service	virt-who send host/guest mapping info to server
3. Open server webUI, delete system	
4. Restart virt-who service and check rhsm log	virt-who won't send host/guest mapping info to server. It won't show any other exception info except the following info: "Unable to send data: Communication with subscription manager failed: consumer no longer exists"
5. Register system to server # subscription-manager clean # subscription-manager register --username=admin --password=admin	
6. Monitor virt-who's log # tail -f /var/log/rhsm/rhsm.log Open server webUI, delete hypervisor	It won't show any exception info in the log.

RHEL7-90471 - 1079-Check the virt-who parameters consistency by CLI

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1404117, Bug 1461417
1. stop virt-who service # systemctl stop virt-who	
2. Run virt-who with all right and consistent parameters for your different modes, such as: # virt-who --libvirt --libvirt-owner=ACME_Corporation --libvirt-env=Library --libvirt-server=[Host2_IP] --libvirt-username=root --libvirt-password=redhat -d -o	Host/Guest mapping info can be showed and sent to server successfully.
3. Run virt-who with inconsistent parameters, such as: # virt-who --libvirt --hyperv-owner=ACME_Corporation --libvirt-env=Library --libvirt-server=[Host2_IP] --libvirt-username=root --xen-password=redhat -d -o	virt-who will fail to be started with error log: Argument --hyperv-owner does not match virtualization backend: libvirt

RHEL7-95000 - 1080 - [ESX] Check filter(exclude)_host_parents ability using wildcard

Step	Expected Result
***Only for ESX mode	Refer to: BZ 1461272
1. create a config file in /etc/virt-who.d, and add filter_host_parents with domain_id value to filter host, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library filter_host_parents="domain-s98"	should filter out host "domain-s98"
2. configure filter_host_parents using ending wildcard, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library filter_host_parents="domain-*"	should filter out all the hosts beginning with "domain-". [BZ 1461272]
3. configure exclude_host_parents using beginning wildcard, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P! owner=ACME_Corporation env=Library exclude_host_parents="*-s98"	should exclude the host ending with "-s98" [BZ 1461272]
4. configure filter_host_parents and exclude_host_parents together using wildcard, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.66.79.72 username=Administrator@vsphere.local password=qwer1234P!	should exclude the host ending with "-s98" from all hosts beginning with "domain-" [BZ 1461272]

owner=ACME_Corporation env=Library filter_host_parents="domain-*" exclude_host_parents="*-s98"	

RHEL7-103659 - 1081 - Creat a config file with two different hypervisors against different servers in /etc/virt-who.d/

Step	Expected Result
***Not for Local_Libvirt, VDSM Note: no need to register virt-who host.	Not for SAM with **Bug 1403122** - Failed to send mapping info to SAM when run virt-who with rhsm_username and rhsm_password **[WONTFIX]**
1. Disable hypervisor options in /etc/sysconfig/virt-who	
2. Create a new config file including two hypervisors against two different servers in /etc/virt-who.d/ with rhsm parameters, such as: # vi /etc/virt-who.d/test.conf [stage-esx] type=esx owner=11343171 env=11343171 server=10.73.3.234 username=Administrator@vsphere.local password=Welcome1! rhsm_hostname=subscription.rhsm.stage.redhat.com rhsm_port=443 rhsm_prefix=/subscription rhsm_username=virtwho_test rhsm_password=redhat [sat-hyperv] type=hyperv owner=Default_Organization env=Library server=10.73.5.244 username=Administrator password=Welcome1 rhsm_hostname=bootp-73-3-227.eng.pek2.redhat.com rhsm_port=443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin	
3. Restart virt-who service and check rhsm log	virt-who run normally and the two hypervisors mapping can be got and sent successfully.
4. Check the two hypervisors' info in server WebUI.	The two hypervisors can be

	listed to the coincident server.

RHEL7-104173 - 1082 - Virt-who can check invalid parameters in /etc/virt-who.d/*.conf file

Step	Expected Result
***Not for vdsm, local libvirt	Refer to BZ 1436617
1. Register virt-who host to Stage Candlepin/Satellite/Sam server	
2. Create virt-who conf file in /etc/virt-who.d, such as: # vi /etc/virt-who.d/test.con[sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.234 username=Administrator@vsphere.local password=Welcome1!	
3. Restart virt-who service and check rhsm log	virt-who restart normally and the mapping is OK.
4. Add invalid parameters to the virt-who conf file, such as: # vi /etc/virt-who.d/test.con[sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.234 username=Administrator@vsphere.local password=Welcome1! VIRTWHO_ESX_OWNER=Default_Organization VIRTWHO_ESX_ENV=Library VIRTWHO_ESX_SERVER=10.73.3.234 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_PASSWORD=Welcome1!	
5. Restart virt-who service and check rhsm log	virt-who should feedback error message for these invalid options, such as: "Ignoring unknown configuration option "xxx""

RHEL7-110502 - 1083 - Check virt-who can get and send two same hostname to server

Step	Expected Result
***not for Local_Libvirt, VDSM	
1. Prepare two or more hypervisors with same hostname, such as: one vCenter contains two esx hosts with same hostname - "esxhost".	

2. Register virt-who host to Satellite/Stage Candlepin/SAM	
3. Create a config file and set hypervisor_id to hostname, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.2.15 username=Administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967 hypervisor_id=hostname	If remote_libvirt and hyperv, should prepare two hosts with same hostname and create two conf files in /etc/virt-who.d. After restart virt-who, it will only report one list of hostname to server WebUI.
4. Create a config file and set hypervisor_id to uuid, such as: # vi /etc/virt-who.d/esx.conf [test-esx] type=esx server=10.73.2.15 username=Administrator@vsphere.local password=Welcome1! owner=7661967 env=7661967 hypervisor_id=uuid	
5. Restart virt-who and check server WebUI	After restart virt-who, -For Satellite6: it will report the two host uuid to server WebUI. -For Stage Candlepin: it will report the two same hostname to server WebUI

RHEL7-110582 - 1084 - Upgrade virt-who package

Step	Expected Result
***For all hypervisor	
1. Uninstall virt-who # rpm -e virt-who	virt-who should be uninstalled normally
2. Install an old version virt-who, such as: # rpm -ivh virt-who-0.19-2.el7.noarch	install successfully
3. Check the virt-who package # rpm -qa |grep virt-who	the old version of virt-who package should be listed.
4. Configure /etc/sysconfig/virt-who, /etc/virt-who.conf and /etc/virt-who.d/, such as: # vi /etc/sysconfig/virt-who VIRTWHO_DEBUG=1 VIRTWHO_INTERVAL=60	configure successfully

# vi /etc/virt-who.conf interval=120 debug=False # vi /etc/virt-who.d/esx.conf [stage-esx] type=esx owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
5. Restart virt-who service to keep it running # systemctl restart virt-who # systemctl status virt-who	virt-who is running
6. Upgrade the virt-who package to the latest test version from repo # yum update virt-who	
7. Check the virt-who package again # rpm -qa |grep virt-who	virt-who package should have been upgraded to the latest version.
8. Check /etc/sysconfig/virt-who, /etc/virt-who.conf and /etc/virt-who.d/x.conf	the configured info in above step4 still exists:
9. Check virt-who status # systemctl status virt-who	virt-who is still running

RHEL7-110601 - 1085 - Using Unicode characters in a hypervisor's account password

Step	Expected Result
***not for local_libvirt, vdsm	
1. Edit hypervisor's account password with Unicode characters.	Hypervisor's account password should be edit with unicode characters successfully, such as: - for libvirt: edit remote libvirt host account password to "red2015?????" - for esx: edit vCenter account password to "Welcome1!?????" - for rhevm: edit rhevm account password to "redhat?????" - for xen: edit xenmaster pool account password to "xen!@#$%^&*" - for hyperv: edit windows account password to "Welcome1?????"
2. Restart virt-who service to send	host-guest mapping should be ok in rhsm

mapping and check rhsm log	log. *** Bug 1503271 - Problem with virt-who using Unicode characters in a hypervisor's account password?
3. Check server WebUI	hypervisors should be registered successfully.
4. Edit the account password back to original.	should no problem

RHEL7-110678 - 1086 - Congiure multi virt-who to send mapping

Step	Expected Result
***for all hypervisors	
1. Prepare two or more virt-who hosts	
2. Register all virt-who hosts to the same server - SAM/Satellite/Stage Candlepin	register successfully
3. Configure all the virt-who with different hypervisor modes by /etc/virt-who.d/xxx.conf or /etc/sysconfig/virt-who	??if need configure virt-who with the same hypervisor??
4. Start all the virt-who service at the same time and check rhsm log # systemctl restart virt-who & tail -f /var/log/rhsm/rhsm.log	all virt-who service should be restarted normally and mapping should be OK
5. Check server WebUI	all hypervisors should be registered successfully

RHEL-112993 - 1087 - Virt-who how to check the job state

Step	Expected Result
***for all hypervisors against Stage Candlepin and Satellite6.3	
1. prepare one config file in /etc/virt-who.d, and then run virt-who with interval 60: # virt-who -i 60	virt-who will wait 15s to check the job state, such as: 2017-11-03 01:22:17,475 INFO: Report for config "esx_config" gathered, placing in datastore 2017-11-03 01:22:18,394 INFO: Sending update in hosts-to-guests mapping for config "destination_-1557685887681118964": 2 hypervisors and 1 guests found 2017-11-03 01:22:33,747 INFO: Mapping for config "destination_-1557685887681118964" updated

	2017-11-03 01:23:17,478 INFO: Report for config "esx_config" gathered, placing in datastore
2. prepare 2 config files in /etc/virt-who.d, and then run virt-who with interval 60: # virt-who -i 60	for rhel6.9 or rhel7.3, virt-who will print and send the report one by one immediately, after that, will check the job state one by one (every 15s to check) for rhel7.4 and rhel6.10 or above, virt-who will print and send all the reports together, after that, only check the job state once
3. prepare 5 config files in /etc/virt-who.d, and then run virt-who with interval 60: # virt-who -i 60	virt-who will take 15 seconds for each check event, now I have 5 config files to send, virt-who how to check the job state? for rhel7.4 or above, all the reports will be printed and sent together, no matter how many config files, only check the job state once (take 15s) for rhel6.9 and 7.3, the report will be printed and sent one by one, after that, will check the job state for each report, it will take 5*15=75s to check all the job state. But the interval time is 60s, if the job state check events can't be finished within the interval time, virt-who will send the check event in next interval

RHEL-113033 - 1088- Check hosts/guests mapping info is pointing to the specified owner in the rhsm.log

Step	Expected Result
***for all hypervisors	Refer to Bug 1408556
1. Create a config file in /etc/virt-who.d/virt-who.conf, make sure the owner is enabled, such as: # vi /etc/virt-who.d/virt-who.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
2. Restart virt-who service and check rhsm log # systemctl restart virt-who & tail -f /var/log/rhsm/rhsm.log	virt-who should be started normally and show the h/g mapping is sent to which owner, such as: Host-to-guest mapping being sent to

	'Default_Organization'

RHEL-113034 - 1089 - Check all the options are valid in /etc/virt-who.d/xxx.conf

Step	Expected Result
***not for Local_Libvirt, VDSM	Refer to Bug 1436617
1. Create a config file in /etc/virt-who.d/, and make sure all the options are available, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
2. Restart virt-who service and check rhsm log # systemctl restart virt-who & tail -f /var/log/rhsm/rhsm.log	virt-who should be started and mapping can be got/sent successfully.
3. Add some unsupported options to the conf file, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1! VIRTWHO_LIBVIRT_OWNER=Default_Organization VIRTWHO_LIBVIRT_ENV=Library VIRTWHO_LIBVIRT_SERVER=10.66.129.67 VIRTWHO_LIBVIRT_USERNAME=root VIRTWHO_LIBVIRT_PASSWORD=red2015	
4. Restart virt-who service and check rhsm log # systemctl restart virt-who & tail -f /var/log/rhsm/rhsm.log	Error message should be showed about the unsupported options, such as: "Ignoring unknown configuration option "xxx"

RHEL-113035 - 1090 - Check the detail info of virt-who package by "# rpm -qi virt-who"

Step	Expected Result
***for all hypervisors	Refer to Bug 1502442
1. Install the latest virt-who package # yum install virt-who	
2. Check details info of the virt-who	should rightly list all the virt-who package

package # rpm -qi virt-who Name : virt-who Version : 0.21.0 Release : 1.el7 Architecture: noarch Install Date: Thu 02 Nov 2017 03:57:44 PM CST Group : System Environment/Base Size : 795652 License : GPLv2+ Signature : (none) Source RPM : virt-who-0.21.0-1.el7.src.rpm Build Date : Tue 31 Oct 2017 02:49:41 AM CST Build Host : ppc-055.build.eng.bos.redhat.com Relocations : (not relocatable) Packager : Red Hat, Inc. <http://bugzilla.redhat.com/bugzilla> Vendor : Red Hat, Inc. URL : https://github.com/virt-who/virt-who Summary : Agent for reporting virtual guest IDs to subscription-manager Description : Agent that collects information about virtual guests present in the system and report them to the subscription manager.	detail, Name: Version: Release: Architecture: ----Not for rhel6 Install Date: Source RPM: Build Date: ?? Build Host: Vendor : Red Hat, Inc. URL : https://github.com/virt-who/virt-who

RHEL-114168 - 1091 - Check section header option - "[global]" in /etc/virt-who.conf

Step	Expected Result
***for all hypervisor	
1. Disable DEBUG/ONESHOE/INTERVAL options in /etc/sysconfig/virt-who	
2. Configure virt-who run in any hypervisor mode by any way, such as: [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
3. Configure /etc/virt-who.conf with all options disabled # grep -E -v '(^#|^$)' /etc/virt-who.conf	

4. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart normally without debug info and give reminder info: "[global]: No values provided in: global"
5. Enable and set "debug=True" in /etc/virt-who.conf with [global] header disabled. # vi /etc/virt-who.conf #[global] debug=True	
6. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart normally without debug info and give error info: "Configuration file /etc/virt-who.conf contains no section headers"
7. Enable and set "debug=True" in /etc/virt-who.conf with [global] header enabled. # vi /etc/virt-who.conf [global] debug=True	
8. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart normally with debug info and no ERROR info

RHEL-113036 - 1092 - Check global option - "interval" in /etc/virt-who.conf

Step	Expected Result
***for all hypervisor	
1. Disable debug/interval/oneshot in /etc/sysconfig/virt-who, only enable debug option in /etc/virt-who.conf: # grep -E -v '(^#|^$)' /etc/virt-who.conf [global] debug=True	
2. Configure virt-who run in any mode by /etc/virt-who.d/ or /etc/sysconfig/virt-who, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	also can configure virt-who by /etc/sysconfig/virt-who
3. Restart virt-who service	virt-who restart normally with default interval time 3600s with reminder info -

	"[global]: Value for "interval" not set, using default: 3600" and "Starting infinite loop with 3600 seconds interval"
4. Enable [global] option and configure interval value to null, such as: # grep -E -v '(^#|^$)' /etc/virt-who.conf [global] interval= debug=True	
5. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and send report normally with default interval time 3600s with warning info - "??? " ***Bug 1523482 , fail to report with null value
6. Configure interval time to 10s, such as: # grep -E -v '(^#|^$)' /etc/virt-who.conf [global] interval=10 debug=True	
7. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	- virt-who will send mapping by each 3600s with warning info: "Interval value can't be lower than 60 seconds. Default value of 3600 seconds will be used." - should no the warning info show - "[global]: Value for "interval" not set, using default: 3600". ***Bug 1519704 existing, no reminder info
8. Configure interval time to 120s in /etc/virt-who.conf, such as # grep -E -v '(^#|^$)' /etc/virt-who.conf [global] interval=120 debug=True	
9. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who will send mapping by each 120s and should no the warning info show -
10. Configure /etc/sysconfig/virt-who with interval=60 and /etc/virt-who.conf with interval=120, such as: # grep -E -v '(^#|^$)' /etc/sysconfig/virt-who VIRTWHO_INTERVAL=60 # grep -E -v '(^#\|^$)' /etc/virt-who.conf [global] interval=120 debug=True	

11. Restart virt-who service and check rhsm log # systemctl restart virt-who	virt-who will send mapping by each 60s ***NOTE:*** ***1). the interval value configuration in /etc/sysconfig/virt-who is higher than in /etc/virt-who.conf.*** ***2). debug/oneshot=True (or 1) take effect no matter in /etc/sysconfig/virt-who or /etc/virt-who.conf***
12. Stop virt-who service and keep the configuration in step10, then run virt-who by CLI # systemctl stop virt-who # virt-who -d	virt-who will send mapping by each 120 ***NOTE: when run virt-who by CLI without parameters (-i, -d, -o), it will use the setting in /etc/virt-who.conf***
13. Also keep configuration in step10, run virt-who by CLI with "-i" option setting, such as: # virt-who -d -i 80	virt-who will send mapping by each 80 ***NOTE: the interval value setting by CLI is higher than in /etc/virt-who.conf***

RHEL-114169 - 1093 - Check global option - "reporter_id" in /etc/virt-who.conf

Step	Expected Result
***for all hypervisr NOTE: "reporter_id" is the id of this virt-who instance to report mappings, default is HOSTNAME-MACHINEID	Refer to Bug 1523067
1. Configure virt-who run in any mode by /etc/virt-who.d/, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	also can configure virt-who by /etc/sysconfig/virt-who
2. Enable [global] option and configure "reporter_id" option disabled, such as: # vi /etc/virt-who.conf [global] # reporter_id=	
3. Restart virt-who service and check log	virt-who restart normally and report mappings using the default "HOSTN MACHINEID" as "reporter_id" with reminder info: "[global]: Value for "reporter_id" not set, using default: dhcp-128-33.nay.redhat.com-704cfae1bd274ed8acd6a5e05045d24b"
4. Enable and configure "reporter_id" value to null, such as: # vi /etc/virt-who.conf	

[global] reporter_id=	
5. Restart virt-who service	virt-who restart normally and report mappings using the default "HOSTN MACHINEID", such as: "Using reporter_id='dhcp-128-33.nay.redhat.com-704cfae1bd274ed8acd6a5e0 ***Bug 1523067 , still use the null value.
6. Enable and configure "reporter_id" value without non-ASCII, such as: # vi /etc/virt-who.conf [global] reporter_id=xxxxxx	
7. Restart virt-who service and check log	virt-who restart normally and report mappings using "xxxxxx" as reporte as: "Using reporter_id='xxxxxx'"
8. Enable and configure "reporter_id" value with non-ASCII, such as: # vi /etc/virt-who.conf [global] reporter_id=??©¥®ðπ?	
9. Restart virt-who service and check log	virt-who restart normally and report mappings using "??©¥®ðπ?" as rep such as: "Using reporter_id='??©¥®ðπ?'"

RHEL-114170 - 1094 - Check global option - "debug" in /etc/virt-who.conf

Step	Expected Result
***for all hypervisors NOTE: will print debug info to rhsm log with any debug option enabled by /etc/virt-who.conf or /etc/sysconfig/virt-who or CLI.	
1. Disable all options in /etc/sysconfig/virt-who and /etc/virt-who.conf	
2. Configure virt-who run in any mode, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	also can configure virt-who by /etc/sysconfig/virt-who
3. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	restart virt-who and send mapping normally without debug info

4. Enable [global] option and configure "debug" value to null, such as: [global] debug=	
5. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	restart virt-who and report mapping normally without debug info
6. Enable [global] option and configure "debug" value to False, such as: [global] debug=False	
7. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	restart virt-who and report mapping normally without debug info
8. Enable [global] option and configure "debug" value to True, such as: [global] debug=True	
9. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	restart virt-who and report mapping normally with debug info.

RHEL-114171 - 1095 - Check global option - "oneshot" in /etc/virt-who.conf

Step	Expected Result
***for all hypervisors NOTE: virt-who will only run once when any one interval option is enabled by /etc/virt-who.conf or /etc/sysconfig/virt-who or CLI.	
1. Disable all options in /etc/sysconfig/virt-who.	
2. Configure virt-who run in any mode, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
3. Enable [global] option with "oneshot"	

option disabled, such as: [global] debug=True #oneshot=False	
4. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and send mapping normally by each 3600s with warning info: "[global]: Value for "oneshot" not set, using default: False"
5. Configure "oneshot" option value to null, such as: [global] debug=True interval=60 oneshot=	
6. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and send mapping normally by each 60s without warning info - "[global]: Value for "oneshot" not set, using default: False"
7. Configure "oneshot" option value to False, such as: [global] debug=True interval=60 oneshot= False	
8. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and send mapping normally by each 60s without warning info- "[global]: Value for "oneshot" not set, using default: False"
9. Configure "oneshot" option value to null, such as: [global] debug=True oneshot= True	
10. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log # systemctl status virt-who # ps -ef |grep virt-who	virt-who will only send mapping once with reminder info: "Thread 'xxx' stopped after running once", process has been killed. ***Bug 1448821 existing for hyperv and rhevm, no the reminder info.

RHEL-114172 - 1096 - Check global option - "log_per_config" in /etc/virt-who.conf

Step	Expected Result
***for all hypervisor NOTE: "log_per_config=", use to write a separate log file per configuration in the config directory.	
1. Configure virt-who run in two or more hypervisor modes by	Configure two different hypervisors report to

/etc/virt-who.d/, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1! [stage-hyperv] type=hyperv owner=Default_Organization env=Library server=10.73.5.236 username=Administrator password=Welcome1 rhsm_hostname=bootp-73-3-167.eng.pek2.redhat.com rhsm_port=443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin	different [virtwho.destination].
2. Enable [global] option and configure "log_per_config" option disabled, such as: # vi /etc/virt-who.conf [global] # log_per_config=	
3. Remove all log file before tesing # rm -rf /var/log/rhsm/*	
4. Restart virt-who service and check log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and report mapping normally with reminder info: "[global]: Value for "log_per_config" not set, using default: False"
5. Check /var/log/rhsm/ #ls /var/log/rhsm/ rhsm.log	only the rhsm.log
6. Enable [global] option and configure "log_per_config" option to False, such as: # vi /etc/virt-who.conf [global] log_per_config=False	
7. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and report mapping normally, but no the reminder info show - "[global]: Value for "log_per_config" not set, using default: False".
8. Check /var/log/rhsm/ #ls /var/log/rhsm/ rhsm.log	still only the rhsm.log and rhsmcertd.log
9. Enable [global] option and configure "log_per_config"	

option to True, such as: # vi /etc/virt-who.conf [global] log_per_config=True	
10. Restart virt-who service and check log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and report mapping normally, but no the reminder info "[global]: Value for "log_per_config" not set, using default: False". ***Bug 1554258 for rhel6.10
11. Check /var/log/rhsm/ #ls /var/log/rhsm/ rhsm.log virtwho.destination_-3922809058255318456.log virtwho.destination_-7426371236027194430.log virtwho.main.log virtwho.rhsm_log.log	separate log file per configuration
12. Check the rhsm.log # tail -f /var/log/rhsm/rhsm.log	only the [rhsm.https DEBUG], [rhsm.connection INFO] and [rhsm.connection DEBUG] info.
13. Check the virtwho.destination_-3922809058255318456.log # tail -f /var/log/rhsm/virtwho.destination_-3922809058255318456.log	only the [virtwho.destination_-3922809058255318456] log info with mapping messages.
14. Check the virtwho.destination_-7426371236027194430.log # tail -f /var/log/rhsm/virtwho.destination_-7426371236027194430.log	only the [virtwho.destination_-7426371236027194430] log info with mapping messages.
15. Check the virtwho.main.log # tail -f /var/log/rhsm/virtwho.main.log	only the [virtwho.main DEBUG] and [virtwho.main INFO] log info
16. Check the virtwho.rhsm_log.log # tail -f /var/log/rhsm/virtwho.rhsm_log.log	only the [virtwho.rhsm_log WARNING], [virtwho.rhsm_log DEBUG] and [virtwho.rhsm_log INFO].

RHEL-114173 - 1097 - Check global option - "log_dir" in /etc/virt-who.conf

Step	Expected Result
***for all hypervisor NOTE: "log_dir=": configure the absolute path of the directory to write logs to, the default is /var/log/rhsm/	Refer to Bug 1523548,
1. Configure virt-who run in any mode by /etc/virt-who.d/, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166	also can configure virt-who by /etc/sysconfig/virt-who

username=Administrator	
2. Enable [global] option and configure "log_dir" option disabled, such as: # vi /etc/virt-who.conf [global] # log_dir=	
3. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and report mapping normally with reminder info: "[global]: Value for "log_dir" not set, using default: /var/log/rhsm" - all the log info still is in /var/log/rhsm/rhsm.log
4. Enable and configure "log_dir=" option value to null, such as: # vi /etc/virt-who.conf [global] log_dir=	
5. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and report mapping normally with reminder info: "[global]: log_dir cannot be empty, using default" - all the log info still is in /var/log/rhsm/rhsm.log
6. Enable and configure "log_dir=/root/" such as: # vi /etc/virt-who.conf [global] log_dir=/root/	
7. Restart virt-who service and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	- virt-who restart and report mapping normally without any reminder info about "log_dir" is not set - only rhsm related info is printed to /var/log/rhsm/rhsm.log, no any virtwho message ***Bug 1554258 for rhel6.10
8. Check # tail -f /root/rhsm.log	will show all other virtwho log info, such as: [virtwho.init INFO/DEBUG] [virtwho.stage-hyperv DEBUG] [virtwho.destination_-6163071036687252851 DEBUG]

RHEL-114174 - 1098 - Check global option - "log_file" in /etc/virt-who.conf

Step	Expected Result
***for all hypervisors NOTE: log_file: The file name to write logs to (used only if	Refer to Bug 1523548

log_per_config=False)	
1. Configure virt-who run in any mode by /etc/virt-who.d/, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	can configure virt-who by /etc/sysconfig/virt-who
2. Enable [global] option and configure "log_file" option disabled, such as: # vi /etc/virt-who.conf [global] # log_file=	
3. Restart virt-who service and check log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and report mappings normally with reminder info: "[global]: Value for "log_file" not set, using default: rhsm.log"
4. Enable and configure "log_file" value to null # vi /etc/virt-who.conf [global] log_file=	
5. Restart virt-who service and check log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and report mappings normally with reminder info: "[global]: log_file cannot be empty, using default"
6. Enable and configure "log_file" value without non-ascii. # vi /etc/virt-who.conf [global] log_file=virtwho.log	
7. Restart virt-who service and check log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	- virt-who restart and report mapping normally without any reminder info about "log_file" is not set - only rhsm related info is printed to /var/log/rhsm/rhsm.log, virtwho log is printed to /var/log/rhsm/virtwho.log ***Bug 1554258 for rhel6.10
8. Check # tail -f /var/log/rhsm/test_rhsm.log	will show all other virtwho log info, such as: [virtwho.init INFO/DEBUG] [virtwho.stage-hyperv DEBUG] [virtwho.destination_-6163071036687252851 DEBUG]
9. Enable and configure "log_file" value	

without non-ascii. # vi /etc/virt-who.conf [global] log_file=??©¥®ðπ?	
10. Restart virt-who service and check log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	- virt-who restart and report mapping normally without any reminder info about "log_file" is not set - only [rhsm.commection] and [virtwho.config] log info are printed to /var/log/rhsm/rhsm.log, virtwho log is printed to /var/log/rhsm/??©¥®ðπ?
11. Check # tail -f /var/log/rhsm/??©¥®ðπ?	will show all other virtwho log info, such as: [virtwho.init INFO/DEBUG] [virtwho.stage-hyperv DEBUG] [virtwho.destination_-6163071036687252851 DEBUG]

RHEL-114175 - 1099 - Check global option - "configs" in /etc/virt-who.conf

Step	Expected Result
***for all hypervisor NOTE: "configs=": a list of files containing configurations for virt-who.	
1. Configure virt-who run in any mode by /etc/virt-who.d/, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	also can configure virt-who by /etc/sysconfig/virt-who.
2. Enable [lglobal] option and configure "configs=" option disabled, such as: # vi /etc/virt-who.conf [global] # configs=	
3. Restart virt-who and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and report [sat-esx] mapping normally with reminder info - "[global]: Value for "configs" not set, using default: []"
4. Enable and configure "configs=" value to null, such as: # vi /etc/virt-who.conf [global] configs=	

5. Restart virt-who and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	??? no reminder info, need report bug???
6. Enable and configure "configs=" value to wrong "xxx", such as: # vi /etc/virt-who.conf [global] configs=xxx	
7. Restart virt-who and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who start and report [sat-esx] mapping normally with reminder error info - "Unable to read configuration file xxx"
8. Create a valid configuration not in /etc/virt-who.d/, such as: # vi /root/hyperv.conf [stage-hyperv] type=hyperv owner=11373231 env=11373231 server=10.73.5.236 username=Administrator password=Welcome1	
9. Enable and configure "configs=" to an valid config, such as: # vi /etc/virt-who.conf [global] configs=/root/hyperv.conf	
10. Restart virt-who and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart normally and succeed to send all the configurations under /etc/virt-who.d/, /etc/sysconfig/virt-who and the /root/hyperv.conf

RHEL-114354 - 1100 - Check section header option - "[defaults]" in /etc/virt-who.conf

Step	Expected Result
***not for local libvirt and vdsm mode	
1. Configure virt-who run in any hypervisor mode with owner and env disabled, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx #owner=Default_Organization #env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
2. Disable [default] header option in /etc/virt-who.conf with available owner and	

env, such as: # grep -E -v '(^#|^$)' /etc/virt-who.conf #[defaults] owner=Default_Organization env=Library	
3. Restart virt-who and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart normally but failed to send mapping with error: "KeyError: 'owner not in stage-hyperv'" NOTE: the options will not take effect with [defaults] header disabled.
4. Enable [default] header option in /etc/virt-who.conf, such as: # grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] owner=Default_Organization env=Library	
5. Restart virt-who and check rhsm log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	virt-who restart and report mapping normally.

RHEL-113049 - 1101 - Check default option - "owner" in /etc/virt-who.conf

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to Bug 1516173
1. Keep all options disabled in /etc/virt-who.conf.	
2. Configure virt-who run in any hypervisor mode with owner disabled, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
3. Restart virt-who service # systemctl restart virt-who	report mappings normally
4. Configure available owner in /etc/virt-who.conf and disable owner option in /etc/virt-who.d/xxx.conf, such as: # vi /etc/virt-who.conf [defaults] owner=Default_Organization # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx	

#owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
5. Restart virt-who service # systemctl restart virt-who	virt-who should succeed to send mapping ***NOTE: the owner configured in /etc/virt-who.conf can be used for /etc/virt-who.d/x.conf***.
6. Set owner value to null in /etc/virt-who.conf, such as: # grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] owner=	
7. Restart virt-who service # systemctl restart virt-who	virt-who service should be started normally and fail to send mapping with error: "ManagerError: Communication with subscription manager failed with code 415:" ***Bug 1516173 for satellite, report successfully.
8. Set owner to wrong in /etc/virt-who.conf, such as # grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] owner=xxxxxx	
9. Restart virt-who service # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - - For Satellite6: "ManagerError: Cannot send data to: Default_Organization, because owner from configuration: xxxxxx is different”" -For Stage Candlepin: "ManagerError: Communication with subscription manager failed with code 404: Organization with id xxxxxx could not be found"
10. Set available owner in /etc/virt-who.conf and wrong owner in /etc/virt-who.d/xxx.conf, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=xxxxxx env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	

# grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] owner=Default_Organization	
11. Restart virt-who service # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - - For Satellite6: "ManagerError: Cannot send data to: Default_Organization, because owner from configuration: xxxxxx is different”" -For Stage Candlepin: "ManagerError: Communication with subscription manager failed with code 404: Organization with id xxxxxx could not be found" ***NOTE: the owner option configured in /etc/virt-who.d/x.conf is higher than in /etc/virt-who.conf***

RHEL-114355 - 1102 - Check default option - "env" in /etc/virt-who.conf

Step	Expected Result
***Not for Local_Libvirt, VDSM	
1. Keep all options in /etc/virt-who.conf disabled.	
2. Configure virt-who run in any hypervisor mode with env disabled, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
3. Restart virt-who service # systemctl restart virt-who	report mappings normally
4. Configure available env in /etc/virt-who.conf and disable env option in /etc/virt-who.d/xxx.conf, such as: # vi /etc/virt-who.conf [defaults] env=Library # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization #env=Library	

server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
5. Restart virt-who service # systemctl restart virt-who	virt-who should succeed to send mapping ***NOTE: the env configured in /etc/virt-who.conf can be used for /etc/virt-who.d/x.conf***
6. Set env value to null in /etc/virt-who.conf, such as: # grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] env=	
7. Restart virt-who service # systemctl restart virt-who	start virt-who normally, but failed to send the mapping with reminder info - "ManagerError: Communication with subscription manager failed with code 415:" ***Bug 1530290 for all, still send mapping out
8. Set env to wrong in /etc/virt-who.conf, such as # grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] env=xxxxxx	
9. Restart virt-who service # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info - for satellite62: "ManagerError: Cannot send data to: Default_Organization, because Satellite env: Library differs from configuration: xxxx" ***Bug 1530426 for stage, also send out mapping
10. Set available env in /etc/virt-who.conf and wrong owner in /etc/virt-who.d/xxx.conf, such as: # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=xxxxxx server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1! # grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] env=Library	
11. Restart virt-who service # systemctl restart virt-who	start virt-who normally, but failed to send mapping with reminder info -

	for satellite62: "ManagerError: Cannot send data to: Default_Organization, because Satellite env: Library differs from configuration: xxxx" ***Bug 1530426 for stage, also send out mapping ***NOTE: the env options configured in /etc/virt-who.d/x.conf is higher than in /etc/virt-who.conf***

RHEL-113050 - 1103 - Check default option - "hypervisor_id" in /etc/virt-who.conf

Step	Expected Result
***not for Local_Libvirt and VDSM	
1. Configure virt-who run in any mode in /etc/virt-who.d/ # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
2. Restart virt-who service # systemctl restart virt-who	virt-who should send mapping with: "hypervisorId": "uuid"
3. Set "hypervisor_id=uuid" in /etc/virt-who.conf # grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] hypervisor_id=uuid	
4. Restart virt-who service # systemctl restart virt-who	virt-who should send mapping with: "hypervisorId": "uuid"
5. Set "hypervisor_id=hostname" in /etc/virt-who.conf # grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] hypervisor_id=hostname	
6. Restart virt-who service # systemctl restart virt-who	virt-who should send mapping with: "hypervisorId": "hostname"
7. Set "hypervisor_id=hwuuid" in /etc/virt-who.conf # grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] hypervisor_id=hwuuid	just for ESX and RHEVM mode
8. Restart virt-who service # systemctl restart virt-who	virt-who should send mapping with: "hypervisorId": "hwuuid"

9. Set "hypervisor_id=hostname" in /etc/virt-who.conf and "hypervisor_id=uuid" in /etc/virt-who.d/x.conf # grep -E -v '(^#|^$)' /etc/virt-who.conf [defaults] hypervisor_id=hostname # vi /etc/virt-who.d/esx.conf [sat-esx] type=esx owner=Default_Organization env=Library server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1! hypervisor_id=uuid	
10. Restart virt-who service # systemctl restart virt-who	virt-who should send mapping with: "hypervisorId": "uuid" ***NOTE: the hypervisor_id option cofigured in /etc/virt-who.d/x.conf is higher than /etc/virt-who.conf***

RHEL-113447 - 1104 - Check [config_name] option by /etc/virt-who.d/ config file

Step	Expected Result
***Not for Local_Libvirt	Refer to Bug 1506869
1. Create a config file with available options, such as: [stage-esx] type=esx owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
2. Restart virt-who service and check rhsm.log # systemctl restart virt-who	virt-who start normally and send mapping successfully.
3. Only create a config file with [config_name] option disabled, such as: #[stage-esx] type=esx owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
4. Restart virt-who service and check rhsm.log	- failed to start virt-who with reminder info: "Configuration file /etc/virt-who.d/xen.conf

# systemctl restart virt-who # systemctl restart virt-who	contains no section headers" in rhsm log. ***Bug 1516120 existing, virt-who start normally. - virt-who should not run the local libvirt mode. ***Bug 1506869 existing, run local libvirt.
5. Configure another valid configuration, then restart virt-who service.	virt-who start normally, succeed to report the valid one, and fail to send the bad one with reminder info "Configuration file /etc/virt-who.d/xen.conf contains no section headers".
6. Only create a config file with [config_name] value is null, such as: [] type=esx owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
7. Restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl restart virt-who	- failed to start virt-who with reminder info: "Configuration file /etc/virt-who.d/xen.conf contains no section headers" in rhsm log and "no suitable backend configuration can be found" by the command "# systemctl restart virt-who" ***Bug 1516120 existing, virt-who start normally. - virt-who should not run the local libvirt mode. ***Bug 1506869 existing, run local libvirt.
8. Configure another valid configuration, then restart virt-who service.	virt-who start normally, succeed to report the valid one, and fail to send the bad one with reminder info "Configuration file /etc/virt-who.d/xen.conf contains no section headers".
9. Only create a config file with [config_name] value is one space, such as: [ ] type=esx owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
10. Restart virt-who service and check rhsm.log # systemctl restart virt-who	- failed to start virt-who with reminder info: "Configuration file /etc/virt-who.d/xen.conf contains no section headers" in rhsm log

# systemctl restart virt-who	and "no suitable backend configuration can be found" by the command "# systemctl restart virt-who" ***Bug 1516120 existing, virt-who start and send mapping normally using the space as name. - virt-who should not run the local libvirt mode.
11. Configure another valid configuration, then restart virt-who service.	virt-who start normally, succeed to report the valid one and fail to send the bad one with reminder info "Configuration file /etc/virt-who.d/xen.conf contains no section headers". ***Bug 1516120 existing, virt-who start and send mapping normally using the space as name.
12. Only configure the [config_name] value with non-ASCii, such as: [??©¥®ðπ?] type=esx owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
13. Restart virt-who service and check rhsm.log # systemctl restart virt-who	virt-who start normally and send mapping successfully.

RHEL-113339 - 1105 - Check type option by /etc/virt-who.d/ config file

Step	Expected Result
***not for local KVM	Refer to Bug 1506893
1. Create a config file with available options, such as: [stage-esx] type=esx owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
2. Restart virt-who service and check rhsm.log # systemctl restart virt-who	virt-who start normally and send mapping successfully.
3. Only create a config file with type option disabled, such as: [stage-esx]	

#type=esx owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
4. Restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl status virt-who	- fail to start virt-who with reminder info - "No valid configurations found'" in rhsm.log ***Bug 1506893 existing,virt-who still running.
5. Configure another valid configuration, then restart virt-who service.	virt-who should be started normally, succeed to report the valid one, and failed to send the bad one with reminder info - "Value for "type" not set, using default: libvirt" and "no connection driver available for 10.73.3.166"
6. Only create a config file with type value is null, such as: [stage-esx] type= owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
7. Restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl status virt-who	-fail to start virt-who with reminder info, such as: "Dropping invalid configuration "stage-esx"" and several messages about ignoring unknown configuration options in the conf file. - should not run default local libvirt mode
8. Configure another valid configuration, then restart virt-who service.	start virt-who normally, succeed to report the valid one, and failed to send the bad one with reminder info like step7.
9. Create a config file with type value is wrong without non-ASCII, such as: [stage-esx] type=xxxx owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
10. Restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl status virt-who	-fail to start virt-who with reminder info, such as: "Dropping invalid configuration "stage-esx"" and several messages about

	ignoring unknown configuration options in the conf file. - should not run default local libvirt mode
11. Configure another valid configuration, then restart virt-who service.	start virt-who normally, succeed to report the valid one, and failed to send the bad one with reminder info like step10.
12. Create a config file with type value is wrong without non-ASCII, such as: [stage-esx] type=??©¥®ðπ? owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
13. Restart virt-who service and check rhsm.log # systemctl restart virt-who # systemctl status virt-who	-fail to start virt-who with reminder info, such as: "Dropping invalid configuration "stage-esx"" and several messages about ignoring unknown configuration options in the conf file. - should not run default local libvirt mode
14. Configure another valid configuration, then restart virt-who service.	start virt-who normally, succeed to report the valid one, and failed to send the bad one with reminder info like step13.

RHEL-113340 - 1106 - Check --[virt-who type]-server option by CLI

Step	Expected Result
***Not for Local_Libvirt	Bug 1530562
1. Stop virt-who service # systemctl stop virt-who	
2. Run virt-who by CLI with available options, such as: #virt-who --esx --esx-owner=11343171 --esx-env=11343171 --esx-server=10.73.3.166 --esx-username="Administrator@vsphere.local" --esx-password='Welcome1!' -d	virt-who should start normally and send mapping successfully.
3. Run virt-who without "--[virt-who type]-server" option, such as: # virt-who --esx --esx-owner=11343171 --esx-env=11343171 --esx-username="Administrator@vsphere.local" --esx-password='Welcome1!' -d	fail to start virt-who with error info: "Required command line argument: --esx-server is not set." for remote libvirt: will run the local libvirt
4. Run virt-who with "--[virt-who type]-server" value is null, such as:	fail to start virt-who with error info: "Required command line argument: --esx-

# virt-who --esx --esx-owner=11343171 --esx-env=11343171 --esx-server= --esx-username="Administrator@vsphere.local" --esx-password='Welcome1!' -d	server is not set." for remote libvirt: will run the local libvirt
5. Run virt-who with "--[virt-who type]-server" value is wrong, such as: # virt-who --esx --esx-owner=11343171 --esx-env=11343171 --esx-server=xxxxxx --esx-username="Administrator@vsphere.local" --esx-password='Welcome1!' -d	start virt-who normally with error info: "Thread 'env/cmdline' fails with error: ('Connection aborted.', gaierror(-2, 'Name or service not known'))"

RHEL-113341 - 1107 - Check virt-who "VIRTWHO_TYPE_SERVER" option by /etc/sysconfig/virt-who

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to Bug 1512778 Bug 1530562
1. Configure virt-who by /etc/sysconfig/virt-who with all available options, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=11343171 VIRTWHO_ESX_ENV=11343171 VIRTWHO_ESX_SERVER=10.73.3.166 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_PASSWORD=Welcome1!	
2. Restart virt-who service and check rhsm log # systemctl restart virt-who	virt-who start normally and send mapping successfully
3. Only configure virt-who by /etc/sysconfig/virt-who with server option disabled, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=11343171 VIRTWHO_ESX_ENV=11343171 #VIRTWHO_ESX_SERVER=10.73.3.166 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_PASSWORD=Welcome1!	
4. Restart virt-who service and check rhsm log # systemctl restart virt-who # systemctl status virt-who # ps -ef |grep virt-who	- fail to start virt-who with reminder info: "'VIRTWHO_ESX_SERVER' is not set" - virt-who is not runing and no process exists. ***Bug 1516209 [comment5] existing for remote libvirt, can start virt-who. ***Bug 1530557 for esx/xen/hyperv/rhevm, wrong reminder info

5. Create any one valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service.	start virt-who normally, succeed to send the valid one, but fail to run the bad one with reminder info - "'VIRTWHO_ESX_SERVER' is not set" - for remote libivrt, will run the default local libvirt [Bug 1530562 closed as notabug] ***Bug 1530557 for esx/xen/hyperv/rhevm, wrong reminder info
6. Only configure virt-who by /etc/sysconfig/virt-who with server option value is null, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=11343171 VIRTWHO_ESX_ENV=11343171 VIRTWHO_ESX_SERVER= VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_PASSWORD=Welcome1!	
7. Restart virt-who service and check rhsm log # systemctl restart virt-who # systemctl status virt-who # ps -ef |grep virt-who	fail to start virt-who with reminder info - "'VIRTWHO_ESX_SERVER' is not set" - virt-who is not runing and no process exists. ***Bug 1516209 [comment5] existing for remote libvirt, can start virt-who. ***Bug 1530557 for esx/xen/hyperv/rhevm, wrong reminder info
8. Create any one valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service.	start virt-who normally, succeed to send the valid one, but fail to run the bad one with reminder info - "'VIRTWHO_ESX_SERVER' is not set" - for remote libivrt, will run the default local libvirt [Bug 1530562 closed as notabug] ***Bug 1530557 for esx/xen/hyperv/rhevm, wrong reminder info
9. Only configure virt-who by /etc/sysconfig/virt-who with server option value is wrong without non-ASCII, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=11343171 VIRTWHO_ESX_ENV=11343171 VIRTWHO_ESX_SERVER=xxx VIRTWHO_ESX_USERNAME=Administrator@vsphere.local	

VIRTWHO_ESX_PASSWORD=Welcome1!	
10. Restart virt-who service and check rhsm log # systemctl restart virt-who	start virt-who normally with reminder info - "Thread 'env/cmdline' fails with error: ('Connection aborted.', gaierror(-2, 'Name or service not known'))"
11. Create any one valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service.	start virt-who normally, succeed to send the valid one, failed to send the bad one with reminder info - "Thread 'env/cmdline' fails with error: ('Connection aborted.', gaierror(-2, 'Name or service not known'))"
12. Only configure virt-who by /etc/sysconfig/virt-who with server option value is wrong with non-ASCII, such as: VIRTWHO_ESX=1 VIRTWHO_ESX_OWNER=11343171 VIRTWHO_ESX_ENV=11343171 VIRTWHO_ESX_SERVER=??©¥®ðπ? VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_PASSWORD=Welcome1!	
13. Restart virt-who service and check rhsm log # systemctl restart virt-who	start virt-who normally with reminder info - - for xen/esx/hyperv/rhevm: "Thread 'env/cmdline' fails with error: ('Connection aborted.', gaierror(-2, 'Name or service not known'))" - for remote libvirt: "internal error: Unable to parse URI qemu+ssh://root@??©¥®ðπ?/system?no_tty=1"
14. Create any one valid configuration by /etc/virt-who.d/xxx.conf, then restart virt-who service.	start virt-who normally, succeed to send the valid one, failed to send the bad one with reminder info like above step13

RHEL-113342 - 1108 - Check virt-who "server" option by /etc/virt-who.d config file

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to Bug 1530562
1. Create a config file with all available value in /etc/virt-who.d/, such as: # vi /etc/virt-who.d/esx.conf	

[stage-esx] type=esx owner=11373231 env=11373231 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
2. Restart virt-who service and check rhsm log # systemctl restart virt-who	virt-who start normally and send mapping successfully
3. Only create a config file with server option disabled in /etc/virt-who.d/, such as: # vi /etc/virt-who.d/esx.conf [stage-esx] type=esx owner=11373231 env=11373231 # server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
4. Restart virt-who service and check rhsm log # systemctl restart virt-who # systemctl status virt-who # ps -ef | grep virt-who	- failed to start virt-who with reminder info - "[sat-esx]: Required option: "server" not set." and "virt-who can't be started: no valid configuration found" - virt-who is not runing and no process exists. ***Bug 1516209 [comment5] existing for remote libvirt, can start virt-who.
5. Create any another valid configuration then restart virt-who service.	virt-who should start normally, succeed to send the available hypervisor, but fail to run the bad one with reminder info: "[sat-esx]: Required option: "server" not set." - for remote libivrt, will run the default local libvirt [Bug 1530562 closed as notabug]
6. Only create a config file with server value is null in /etc/virt-who.d/, such as: # vi /etc/virt-who.d/esx.conf [stage-esx] type=esx owner=11373231 env=11373231 server= username=Administrator@vsphere.local password=Welcome1!	
7. Restart virt-who service and check rhsm log # systemctl restart virt-who # systemctl restart virt-who # ps -ef |grep virt-who	failed to start virt-who with reminder info- "Required option: "server" is missing in: "sat-rhevm"" and "virt-who can't be started: no valid configuration found" - virt-who is not runing and no process

	exists. ***Bug 1516209 existing for all, virt-who still can be started
8. Create any another valid configuration then restart virt-who service.	start virt-who normally, succeed to report the valid one, but fail to run the bad with reminder info, such as - "Thread 'sat-rhevm' fails with error: Unable to connect to RHEV-M server: Invalid URL u'https://:8443/api': No host supplied"
9. Only create a config file with server value is wrong without non-ASCII in /etc/virt-who.d/, such as: # vi /etc/virt-who.d/esx.conf [stage-esx] type=esx owner=11373231 env=11373231 server=xxxx username=Administrator@vsphere.local password=Welcome1!	
10. Restart virt-who service and check rhsm log # systemctl restart virt-who	start virt-who normally but fail to get mapping with error: " Thread 'stage-esx' fails with error: ('Connection aborted.', gaierror(-2, 'Name or service not known'))"
11. Create any another valid configuration then restart virt-who service.	start virt-who normally, succeed to report the valid one, but fail to run the bad one with reminder info, such as: " Thread 'stage-esx' fails with error: ('Connection aborted.', gaierror(-2, 'Name or service not known'))"
12. Only create a config file with server value is wrong with non-ASCII in /etc/virt-who.d/, such as: # vi /etc/virt-who.d/esx.conf [stage-esx] type=esx owner=11373231 env=11373231 server=??©¥®ðπ? username=Administrator@vsphere.local password=Welcome1!	
13. Restart virt-who service and check rhsm log # systemctl restart virt-who	start virt-who normally but fail to get mapping with error: - for xen/hyperv/esx/rhevm: " Thread 'stage-esx' fails with error: ('Connection aborted.', gaierror(-2, 'Name or service not known'))" - for remote libvirt: "internal error: Unable to parse URI

	qemu+ssh://root@?? ©¥®ðπ?/system?no_tty=1"
14. Create any another valid configuration then restart virt-who service.	start virt-who normally, succeed to report the valid one, but fail to run the bad one with reminder info, such as: " Thread 'stage-esx' fails with error: ('Connection aborted.', gaierror(-2, 'Name or service not known'))"

2 . Virt-who VM Manager cases

RHEL7-53860 - 2001-No any hosts on Vcenter/RHEVM

Step	Expected Result
***Only for ESX, RHEVM	Refer to BZ 1409984 BZ 1452436
1. make sure there is no any hosts on Vcenter or RHEVM	
1. make sure there is no any hosts on Vcenter or RHEVM	
2. check rhsm.log	It should show log like - "Hosts-to-guests mapping for config "xxx": 0 hypervisors and 0 guests found" - for RHEVM, log as following: 2017-07-31 14:58:01,283 [virtwho.sat-rhevm INFO] MainProcess(22534):Thread-2 @virt.py:_send_data:912 - Report for config "sat-rhevm" gathered, placing in datastore 2017-07-31 14:58:01,652 [virtwho.destination_-6765871383904734538 INFO] MainProcess(22534):Thread-3 @virt.py:_send_data:590 - Hosts-to-guests mapping for config "sat-rhevm": 0 hypervisors and 0 guests found ***Bug BZ 1409984 existing for esx, failed get mapping with null host.

RHEL7-53861 - 2002-Add a new host to Vcenter/RHEVM

Step	Expected Result
***Only for ESX, RHEVM	Refer to BZ 1392704 BZ 1400431
1. add a new host to Vcenter or RHEVM	
2. check rhsm.log	the new host uuid should be found from rhsm.log and Host/Guest mapping info can

	be got and sent to server without error.
3. check the host uuid by web UI.	the host uuid should be found by web ui and the uuid is the same as rhsm.log

RHEL7-53862 - 2003-Delete a host from Vcenter/RHEVM

Step	Expected Result
1. delete a host from Vcenter or RHEVM	***Only for ESX, RHEVM
2. check rhsm.log	the host uuid should be removed from rhsm.log
3. check the host uuid by web UI.	the host uuid should be removed from web ui

RHEL7-53863 - 2004-No any guests on host or hypervisors

Step	Expected Result
***For all hypervisor	
1. make sure there is no any guests on host or hypervisors	
2. check rhsm.log	shouldn't show any guest uuid for the hosts or hypervisor. it should be [ ] for vdsm and kvm, show { } for esx, hyper-v, rhevm.

RHEL7-53864 - 2005-Add a guest and then reboot host such as libvirt / vdsm / vcenter / rhevm / hyperv

Step	Expected Result
***For all hypervisor	Refer to BZ 1231602 BZ 1247866 BZ 1415050
1. add a new guest to host or hypervisors	
2. power on the guest	
3. check rhsm.log	the new guest uuid should be found from host/guests mapping info and no any error info found
4. make sure the host or hypervisors subscribe to a physical pool which can create a bonus pool	
5. make sure the guest registered, and subscribed to the bonus pool	
6. reboot following remote host, if libvirt mode, restart libvirtd service	

if vdsm mode, restart vdsm service if esx mode, reboot vcenter server if rhevm mode, reboot rhevm server if hyperv mode, reboot hyperv server	
7. check the rhsm.log after reboot	after reboot successfully, the hosts/guests mapping info should be found normally (needn't wait for over 15min) and no error info if the guest is a new, need to make sure the uuid is matched. ***Bug BZ 1415050 existing for xen and libvirt
8. check the host and guest subscription status, such as: # subscription-manager list --co	after reboot, the hosts/guests subscription should not be revoked and no changes

RHEL7-85736 - 2006-Edit guest name&description with unicode words

Step	Expected Result
***For all hypervisor	Refer to BZ 1391512 BZ 1388577
1. add a new guest to host or hypervisors without chinese words in the guest name.	
2. power on the guest	
3. restart virt-who service and check rhsm.log	the guest uuid should be found from host/guests mapping info normally and the mapping info can be sent to server succesfully.
4. edit the guest name and description with chinese words, eg: ??? ???? _rhel7.3?	- for libvirt: Name + Title + Description - for esx: Name + - for xen: Name + Description -for rhevm/vdsm: Name + Description , but don't support "€€€€" -for hyperv: Name + note
5. restart virt-who service again and check rhsm.log	the guest uuid should also be found from host/guests mapping info normally and no any error fond. eg: UnicodeEncodeError: 'ascii' codec can't encode characters in position 657-662: ordinal not in range(128)

RHEL7-53865 - 2007-Delete a guest and then reboot host such as libvirt / vdsm / vcenter / rhevm / hyperv /Xenhost

Step	Expected Result
***For all hypervisor	Refer to BZ 1415050
1. power off the guest	
2. delete the guest from host or hypervisors	
3. check rhsm.log	the guest uuid should be removed from host/guests mapping info and no any error info found
4. reboot following remote services or host, such as: if libvirt mode, restart libvirtd service if vdsm mode, restart vdsm service if esx mode, reboot vcenter server if rhevm mode, reboot rhevm server if hyperv mode, reboot hyperv server	
5. check the rhsm.log after reboot	after reboot, the hosts/guests mapping info should be found normally and no error info ***Bug BZ 1415050 existing for xen and libvirt

RHEL7-53866 - 2008-Host can't reachable and then reboot vcenter / rhevm

Step	Expected Result
***Only for ESX, RHEVM	Refer to BZ 1312228
1. Register system to server	
2. Configure virt-who run at esx/rhevm mode restart virt-who service	host/guest mapping info can send to server
3. Monitor virt-who's log, Disconnect one esx/rhel/rhevh host # tail -f /var/log/rhsm/rhsm.log	host/guest mapping info still can send to server
4. Monitor virt-who's log, Reboot / rhevm	host/guest mapping info still can send to server after vcenter/rhevm reboot successfully.

RHEL7-79903 - 2009-Check virt-who can detect the hypervisor's connection/disconnection

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1263512
1. Register system to server	
2. Configure virt-who run at	host/guest mapping info can send to server

esx/rhevm/hyperv/xen mode and refresh interval is 60s. then restart virt-who service # systemctl restart virt-who	every 60s.
3. In vcenter/rhevm/hyperv/xen, Set firewall to block the connection from virt-who's machine	to forbidden: iptables -I INPUT -s 10.66.144.5 -j DROP to recovery: iptables -D INPUT -s 10.66.144.5 -j DROP
4. After 60s, check virt-who's log	virt-who will throw timeout error info in the log. "ReadTimeout: HTTPSConnectionPool(host='10.73.2.95', port=443): Read timed out. (read timeout=64)"
5. In vcenter/rhevm/hyperv/xen, delete the firewall to make virt-who connect vcenter/rhevm/hyperv/xen normally.	
6. After 60s, check virt-who's log	virt-who won't generate error info and it can throw normally info in the log.

RHEL7-79904 - 2010-Check virt-who can detect unreachable proxy

Step	Expected Result
***Not for Local_Libvirt, VDSM	Refer to BZ 1265582
1. Register system to server	
2. Configure virt-who run at esx/rhevm/hyperv/xen mode and make virt-who connect these esx/rhevm/hyperv/xen through proxy. # vi /etc/sysconfig/virt-who VIRTWHO_ESX=1 http_proxy=http://10.73.3.248:3128 VIRTWHO_ESX_OWNER=7661967 VIRTWHO_ESX_ENV=7661967 VIRTWHO_ESX_SERVER=10.73.2.15 VIRTWHO_ESX_USERNAME=Administrator@vsphere.local VIRTWHO_ESX_PASSWORD=Welcome1! [NOTE]: ESX,RHEVM support https_proxy=https://xxxx HYPERV support http_proxy=http://xxxx [Optional]:	host/guest mapping info can send to server successfully.

no_proxy=satserv.redhat.com	
3. In proxy machine, stop squid service. [root@samdns ~]# service squid stop	
4. restart virt-who service and check the virt-who's log # tail -f /var/log/rhsm/rhsm.log	It should show ConnectionError info once as the following: ConnectionError: ('Connection aborted.', BadStatusLine("""",)) or 'Connection refused' It shouldn't show redundant DEBUG info as the following: "[DEBUG] @esx.py:105 - Wait for ESX event finished, timeout"
5. enable "NO_PROXY=*" in /etc/sysconfig/virt-who	
6. restart virt-who service and check the virt-who's log	host/guest mapping info can send to server successfully. **it means the "NO_PROXY=*" can disable all proxy set in /etc/sysconfig/virt-who**

RHEL7-53867 - 2011-Check guest Attr such as resume/pause/poweroff/poweron

Step	Expected Result
***For all hypervisor	Refer to BZ 1353074 BZ 1415050 Bug 1458674
1. make sure the host or hypervisors subscribe to a pool which can create a bonus pool	
2. make sure the guest subscribe to the bonus pool	
3. make guest **pause**	
4. check guest state from rhsm.log	if KVM, Hyper-v, ESX, the state should be "3" if vdsm, rhevm, xen, when suspend, no

	state, the guest will be removed from json ***Bug BZ 1415050 existing for xen, libvirt
5. make guest **resume**	
6. check guest state from rhsm.log check consumed bonus pool check the host/guests mapping info and consumed bonus pool on webUI	if resume, all kvm, vdsm, rhevm, esx, hyper-v, xen, the state should be "1", and the bonus pool shouldn't be revoked ***Bug BZ 1415050 existing for xen, libvirt
7. make guest **poweroff**	
8. check guest state from rhsm.log check consumed bonus pool check the host/guests mapping info and consumed bonus pool on webUI	if KVM, Hyper-v, ESX, the state should be "5" if vdsm, rhevm, xen, will be suspend, no state, the guest will be removed from json ***Bug BZ 1415050 existing for xen, libvirt
9. make guest **poweron**	
10. check guest state from rhsm.log check consumed bonus pool check the host/guests mapping info and consumed bonus pool on webUI	if resume, all kvm, vdsm, rhevm, esx, hyper-v, xen, the state should be "1", and the bonus pool shouldn't be revoked ***Bug BZ 1415050 existing for xen, libvirt

RHEL7-53868 - 2012-Check virt-who can get name, type, hypervisorVersion, capacity from hypervisor

Step	Expected Result
***For all hypervisor	Refer to BZ 1110427, BZ 1321229, BZ 1240728 BZ 1440036
1. Make sure candlepin can support " hypervisors_async" Prepare a host/hypervisors and install a guest on host/hypervisor at least.	
2. Register system with virt-who to server	
3. Configure virt-who run at any mode, start virt-who service and check virt-who's log. -for satellite5.X, satellite6.3 and stage candlepin, will print detail info to rhsm.log: # tail -f /var/log/rhsm/rhsm.log -for satellite6.1 and satellite6.2 and sam, check detail info with -p option: #virt-who -p -d -o	It should display hypervisor's name, type, hypervisorVersion and capacity(cpu.cpu_socket(s)) in the log: Eg: Host-to-guest mapping: { "hypervisors": [{ "hypervisorId": { "hypervisorId": "564D900A-2E82-672D-2CB7-C17F0B3FF876" }, "name": "win16-hyperv-01", "guestIds": [

	{ "guestId": "EBBF4A99-85AD-0947-AB31-45DD18FE96E5", "state": 1, "attributes": { "active": 1, "hypervisorVersion": "10.0.10586.0", "virtWhoType": "hyperv", "hypervisorType": "hyperv" } }], "facts": { "cpu.cpu_socket(s)": "2" } }] } for vdsm and local_kvm, will only show guest info. ***Bug 1440036 for remote libvirt, should gather "name" option

RHEL7-81396 - 2013-Check the connection built info with stage/satellite/sam from rhsm.log

Step	Expected Result
***For all hypervisor	Refer to BZ 1401867
1. Ensure debugging is turned on in virt-who: $ grep VIRTWHO_DEBUG etc/sysconfig/virt-who VIRTWHO_DEBUG=1	
2. Run virt-who and check logs in /var/log/rhsm/rhsm.log	for stage candlepin and satellite6.3: it should show [rhsm.connection INFO] and [rhsm.connection DEBUG] log to rhsm log, such as: 2017-08-01 13:35:38,814 [rhsm.connection DEBUG] MainProcess(11029):Thread-3 @connection.py:_request:516 - Making request: POST /rhsm/hypervisors?owner=Default_Organization&env=Library 2017-08-01 13:35:39,258 [rhsm.connection INFO] MainProcess(11029):Thread-3 @connection.py:_request:552 - Response: status=200, request="POST /rhsm/hypervisors?owner=Default_Organization&env=Library"

RHEL7-53869 - 2014-Migrate a guest to an unsubscribed host

Step	Expected Result

***For all hypervisor	Refer to BZ 1415050
1. prepare two hosts or hypervisors(host1 and host2), and install a guest on host1(guest1)	
2. register host1, host2, guest1	
3. subscribe host/guest by CLI (if hypervisor, subscribe by webui) subscribe host1 to RH00050 physical pool subscribe guest1 to RH00050 bonus pool don't subscribe host2	
4. migrate guest1 to host2	
5. check rhsm.log # tail -f /var/log/rhsm/rhsm.log	the hosts/guests mapping info should be changed, guest1 uuid should be removed from host1 to host2, and no any error info found in all virt-who hosts. ***Bug BZ 1415050 existing for xen and libvirt
6. check the guest's bonus subscription status # subscription-manager list --co	if SAM server guest1's old bonus pool will be revoked(RH00050), and can't subscribe a new one if Satellite server: guest1's old bonus pool will be revoked(RH00050), and will subscribe a new one by auto. 1). libvirt+satellite => guest1's old bonus pool will be revoked(RH00050), but it will subscribe a new bonus pool (RH00204) by auto 2). esx+satellite => guest1's old bonus pool will be revoked(RH00050), but it will subscribe a new bonus pool (RH00204) by auto 3). xen+satellite => guest1's old bonus pool will be revoked(RH00050), but it will subscribe a new bonus pool (RH00204) by auto 4). rhevm+satellite => guest1's old bonus pool will be revoked(RH00050), but it will subscribe a new bonus pool (RH00204) by auto if Stage Candlepin server: guest1's old bonus pool will be revoked(RH00050), and will subscribe a new one by auto. 1). libvirt+Stage => guest1's old bonus

	pool will be revoked(RH00050), but it will subscribe a new bonus pool (RH0103708) by auto 2). hyper-v+Stage => guest1's old bonus pool will be revoked(RH00050), but it will subscribe a new bonus pool (RH0103708) by auto 3). vdsm+Stage => guest1's old bonus pool will be revoked(RH00050), but it will subscribe a new bonus pool (RH0103708) by auto

RHEL7-53870 - 2015-Migrate a guest to a subscribed host

Step	Expected Result
***For all hypervisor	
1. prepare two hosts or hypervisors(host1 and host2), and install a guest on host1(guest1)	
2. register host1, host2, guest1	
3. subscribe host/guest by CLI (if hypervisor, subscribe by webui) subscribe host1 to RH00050 physical pool subscribe guest1 to RH00050 bonus pool subscribe host2 to RH00050 physical pool	
4. migrate guest1 to host2	
5. check rhsm.log # tail -f /var/log/rhsm/rhsm.log	the hosts/guests mapping info should be changed, guest1 uuid should be removed from host1 to host2, and no any error info found in all virt-who hosts.
6. check the guest's bonus subscription status # subscription-manager list --co	if SAM server guest1's old bonus pool will be revoked(RH00050), and can't subcribe a new one if Satellite/ server: guest1's old bonus pool will be revoked (RH00050), but it will subscribe again to the same bonus pool (RH00050) if Stage Candlepin server: guest1's old bonus pool will not be revoked(RH00050), always RH00050

RHEL7-53871 - 2016-[WEBUI] - Migrate a guest to a subscribed host

Step	Expected Result

***For all hypervisor	NOTE: we want to add this case to above migration case, but the webui check is not available for CI auto, so we separate it from above case.
1. prepare two hosts or hypervisors(host1 and host2), and install a guest on host1(guest1)	
2. register host1, host2, guest1	
3. subscribe host/hypervisor and guest by webui subscribe host1 to RH00050 physical pool subscribe guest1 to RH00050 bonus pool subscribe host2 to RH00050 physical pool	if Satellite server: will show which host/hypervisor produces the bonus pool, like - "Guests of virt-who-host1", and can subscribe successfully. if SAM/Stage Canlepin server: will not show bonus pool source detail info, can subscribe to RH00050 bonus pool successfully
4. migrate guest1 to host2	
5. check webui	host1 and guest1 are not associated any more, host2 and guest1 will be associated if Satellite server: the guest1's RH00050 bonus pool change to - "Guests of virt-who-host2" if SAM/Stage Canlepin server: guest1's bonus pool will no changes, still is subscribed to RH00050 bonus pool.

RHEL7-53872 - 2017-Ping-Pong Migrate a guest and then restart such as libvirt / vdsm / vcenter / rhevm / hyperv

Step	Expected Result
***For all hypervisor	Refer to BZ 1468992
1. prepare two hosts or hypervisors(host1 and host2), and install a guest on host1(guest1)	
2. register host1, host2, guest1	
3. subscribe host1 to RH00050 physical pool subscribe guest1 to RH00050 bonus pool subscribe host2 to RH00050 physical pool	
4. [Ping] migrate guest1 to host2	
5. check rhsm.log # tail -f /var/log/rhsm/rhsm.log	if SAM server the hosts/guests mapping info should be changed, guest1 uuid should be removed

	from host1 to host2, and no any error info found in all virt-who hosts. if Satellite server: the hosts/guests mapping info should be changed, guest1 uuid should be removed from host1, will be added to host2, and no any error info found in all virt-who hosts. if Stage Candlepin server: the hosts/guests mapping info should be changed, guest1 uuid should be removed from host1, will be added to host2, and no any error info found in all virt-who hosts.
6. check the guest's bonus subscription status # subscription-manager list --co	if SAM server guest1's old bonus pool will be revoked(RH00050), and can't subcribe a new one if Satellite server guest1's old bonus pool will be revoked(RH00050), but it will subscribe to the same bonus pool again by auto (RH00050) if Stage Candlepin server: guest1's old bonus pool will not be revoked(RH00050), always RH00050
7. [Pong] migrate the guest from host2 to host1	
8. check rhsm.log # tail -f /var/log/rhsm/rhsm.log	the hosts/guests mapping info should be changed, guest1 uuid should be removed from host2, will be added to host1, and no any error info found in all virt-who hosts.
9. check the guest's bonus subscription status # subscription-manager list --co	if SAM server guest1's old bonus pool has been revoked(RH00050), and can't subcribe a new one if Satellite server guest1's old bonus pool will be revoked(RH00050), but it will subscribe to the same bonus pool again by auto (RH00050) ***Bug BZ 1468992 existing for vdsm if Stage Candlepin server: guest1's old bonus pool will not be revoked(RH00050), always RH00050
10. restart service such as: libvirt / vdsm / vcenter / rhevm / hyperv	

11. check the result as step 8, 9	

RHEL7-53873 - 2018-Migrate a guest to another host under fake mode

Step	Expected Result
***For all hypervisor	
1. prepare two hosts or hypervisors(host1 and host2), and install a guest on host1(guest1)	
2. register host1, host2, guest1	
3. config and run virt-who with -p option to create the fake json # virt-who -p -d >/tmp/fake.json	
4. create a fake config file in /etc/virt-who.d, such as: [fake-virt] type=fake file=/tmp/fake.json is_hypervisor=True owner=7661967 env=7661967	
5. restart virt-who service and check rhsm.log	virt-who can send the mapping info according to the file "/tmp/fake.json" normally
6. subscribe host1 to RH00050 physical pool subscribe guest1 to RH00050 bonus pool subscribe host2 to RH00050 physical pool	
7. migrate guest1 to host2	
8. check rhsm.log # tail -f /var/log/rhsm/rhsm.log	after migration, the hosts/guests mapping info should be no changes, guest1 uuid is still exist on host1.
9. check webui	after migration, the host/guests association still no changes
10. check the guest's bonus subscription status # subscription-manager list --co	after migration, the guest's bonus subscription shouldn't be revoked.

3 . Virt-who Subscription cases

RHEL7-53875 - 3001-Check guest virt.uuid/host_type/is_guest facts via GUI and CLI of subscription-manager

Step	Expected Result
***For all hypervisor	
1.Start the guest	
2.Register the guest to Sam/Satellite/Stage	the guest registered successfully
3.Check the virt.uuid facts via GUI # subscription-manager-gui Click the 'System' -> 'View System Facts' -> 'virt'	the virt.uuid displays as following: virt.uuid:45uteefdfjkldfjjsdfjdjf0200
4.Check the facts via CLI # subscription-manager facts --list | grep virt.uuid	the virt.uuid should be the same as above GUI: virt.uuid:45uteefdfjkldfjjsdfjdjf0200
5. Check the virt.host_type facts via GUI # subscription-manager-gui Click the 'System' -> 'View System Facts' -> 'virt'	the virt.host_type dispalys as follow: virt.host_type: vmware
6. Check the facts via CLI # subscription-manager facts --list | grep virt.host_type	the virt.host_type should be the same as above GUI: virt.host_type: vmware
7. Check the virt.host_type facts via GUI # subscription-manager-gui Click the 'System' -> 'View System Facts' -> 'virt'	the virt.is_guest dispalys as follow: virt.is_guest: True
8. Check the facts via CLI # subscription-manager facts --list | grep virt.is_guest	the virt.is_guest should be the same as above GUI: virt.is_guest: True

RHEL7-53876 - 3002-Check the host/guests association info

Step	Expected Result
***For all hypervisor	
1. register host to the SAM/Satellite/Stage	
2. register guest to the SAM/Satellite/Stage	
3. restart virt-who service	

4. check rhsm.log	the host/guests mapping info should be found from rhsm.log
5. check the association in SAM/Satellite/Stage web ui	if no guest register on host, should be no any guest association info found for this host; if the guest register on host, should find the guest running on this host;

RHEL7-53877 - 3003-[Unlimited] GUI - Check Both Type on guest

Step	Expected Result
***For all hypervisor	
1. Make sure the host or hypervisor subscribed to "Resilient Storage for Unlimited Guests" physical pool	
1. Open subscription-manager-gui in guest # subscription-manager-gui	
2. Click "All Available Subscriptions" tab ---> 'Update' button --- > look for a both bonus subscription, such as: ' Resilient Storage for Unlimited Guests '	Available subscriptions are listed, and the "Type" column of bonus shows a value of "Both", available number is correct
3. Click "Attach" button	The virtual subscription can be selected via the contract selection dialog
4. Click "Attach" button in the contract selection dialog	The virtual subscription can be subscribed, check "My Subscribeptions" tab, the "Type" in subscription details should be "Virtual"

RHEL7-53878 - 3004-[Unlimited] The unlimited bonus pool should be created on guest

Step	Expected Result
***For all hypervisor	
1. register the host(hypervisor) and guest to SAM/Satellite/Stage Candlepin	
2. subscribe the host to a pool which can create a bonus pool(SKU:RH00060), please don't sue Datacenter pool # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a8d725864	
3. check the unlimited bonus pool created on guest # subscription-manager list --av	The Unlimited bonus pool shoud be created, such as: Pool ID: 2c90ec9451671b670151675eeecd16bc Available: Unlimited

	System Type: Virtual

RHEL7-53879 - 3005-[Unlimited] The unlimited bonus pool should be subscribed by pool_id on guest

Step	Expected Result
***For all hypervisor	
1. register the host(hypervisor) and guest to SAM/Satellite/Stage Candlepin	
2. subscribe the host to a pool which can create a bonus pool(SKU:RH00060), please don't use Datacenter pool: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a8d725864	
3. check the unlimited bonus pool created on guest # subscription-manager list --av	The Unlimited bonus pool shoud be created, such as: Pool ID: 2c90ec9451671b670151675eeecd16bc Available: Unlimited System Type: Virtual
4. subscribe guest to the unlimited bonus pool by pool_id, such as: # subscription-manager subscribe --pool=2c90ec9451671b670151675eeecd16bc	should be subscribed no error
5. check the consumed info on guest # subscription-manager list --co # subscription-manager list --in	should show the unlimited bonus pool

RHEL7-53880 - 3006-[Unlimited] The unlimited bonus pool can be subscribed by auto on guest

Step	Expected Result
***For all hypervisor	
1. register the host(hypervisor) and guest to SAM/Satellite/Stage Candlepin	
2. subscribe the host to a pool which can create a bonus pool(SKU:RH00060), please don't use Datacenter pool: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a8d725864	
3. check the unlimited bonus pool created on guest # subscription-manager list --av	The Unlimited bonus pool shoud be created, such as: Pool ID: 2c90ec9451671b670151675eeecd16bc Available: Unlimited

	System Type: Virtual
4. subscribe guest to the unlimited bonus pool by pool_id, such as: # subscription-manager subscribe --auto	should be subscribed successfully
5. check the consumed info on guest # subscription-manager list --co # subscription-manager list --in	should show the unlimited bonus pool for satellite/stage, it will subscribe a bonus pool by auto, may be not the bonus pool created by the host subscribed physical pool

RHEL7-53881 - 3007-[Unlimited] Remove host subscribed pool, the unlimited bonus pool should be removed on guest

Step	Expected Result
***For all hypervisor	
1. register the host(hypervisor) and guest to SAM/Satellite/Stage Candlepin	
2. subscribe the host to a pool which can create a bonus pool(SKU:RH00060), please don't use Datacenter pool: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a8d725864	
3. check the unlimited bonus pool created on guest # subscription-manager list --av	The Unlimited bonus pool shoud be created, such as: Pool ID: 2c90ec9451671b670151675eeecd16bc Available: Unlimited System Type: Virtual
4. subscribe guest to the unlimited bonus pool by pool_id or auto, such as: # subscription-manager subscribe --pool=2c90ec9451671b670151675eeecd16bc	should be subscribed successfully
5. check the consumed info on guest # subscription-manager list --co # subscription-manager list --in	should show the unlimited bonus pool
6. check the consumed serial and remove it on host # subscription-manager list --co # subscription-manager remove --serial=5575032216163770990	
7. check the bonus pool revoked or not # subscription-manager refresh # subscription-manager list --co	the unlimited bonus pool should be revoked

RHEL7-53882 - 3008-[Unlimited] Re-register host, check bonus pool revoked and

host/guests mapping info

Step	Expected Result
***For all hypervisor NOTE: for hypervisor, you don't need to register a hypervisor by CLI, you just need to config the virt-who hypervisor mode and restart virt-who service, the hypervisor will be registered to the server as your virt-who host. but you can unregister the hypervisor from satellite/sam/stage web ui	
1. register the host(hypervisor) and guest to SAM/Satellite/Stage Candlepin	
2. subscribe the host to a pool which can create a bonus pool(SKU:RH00060), please don't use Datacenter pool: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a8d725864	
3. check the unlimited bonus pool created on guest # subscription-manager list --av	The Unlimited bonus pool shoud be created, such as: Pool ID: 2c90ec9451671b670151675eeecd16bc Available: Unlimited System Type: Virtual
4. subscribe guest to the unlimited bonus pool by pool_id or auto, such as: # subscription-manager subscribe --pool=2c90ec9451671b670151675eeecd16bc	should be subscribed successfully
5. check the consumed info on guest # subscription-manager list --co # subscription-manager list --in	should show the unlimited pool
6. unregister host # subscription-manager unregister	
check virt-who/libvirtd/vdsmd status	
check virt-who thread number	
7. check the bonus pool revoked or not # subscription-manager refresh # subscription-manager list --co	the unlimited bonus pool should be revoked
8. re-register host again	
check rhsm.log	make sure the host/guests mapping info normally and no any error info found
check web	make sure host/guests mapping info has been send to server

RHEL7-53883 - 3009-[Unlimited] GUI - Subscribe physical unlimited pool on host, subscribe bonus pool on guest

Step	Expected Result
***For all hypervisor NOTE: if the host is not local KVM or VDSM mode, please subscribe the hypervisor by webUI	
1. open subscription-manager-gui on host, click "All Available Subscriptions" tab, click "Update" button.	
2. choose an unlimited physical pool(SKU:RH00060), Click "Subscribe", Note: please don't use Datacenter pool	
3.click "My Subscriptions"	Subscribe successfully to the unlimited pool on host, the Status Details of the consumed subscription are empty or is current.
4.open subscription-manager-gui on guest, click "All Available Subscriptions" tab, click "Update" button.	
5. choose the unlimited bonus pool, click "Subscribe"	
6.click "My Subscriptions"	Subscribe successfully to the bonus pool on guest, the Status Details of the consumed subscription are empty or is current.

RHEL7-53884 - 3010-[Unlimited] GUI - Unsubscribe host by gui, guest's bonus pool should be revoked

Step	Expected Result
***For all hypervisor NOTE: if the host is not local KVM or VDSM mode, please subscribe/unsubscribe the hypervisor by webUI	
1. subscribe the physical unlimited pool on host by GUI(SKU:RH00060)	
2. subscribe the bonus pool on guest by GUI	
3. unsubscribe physical pool on host by GUI	

4. run "subscription-manager refresh" on guest	
5. open subscription-manager-gui on guest check "My Subscriptions" tab check "My Installed Software" tab	The attached bonus pool should be revoked. The RHEL installed product cert will become Red

RHEL7-53885 - 3011-[Unlimited] GUI - Unregister host by gui, guest's bonus pool should be revoked

Step	Expected Result
***For all hypervisor NOTE: if the host is not local KVM or VDSM mode, please subscribe the hypervisor by webUI	
1. subscribe an pyhiscal unlimited pool on host by GUI(SKU:RH00060)	
2. subscribe the bonus pool on guest by GUI	
3. unregister host by GUI	if the host is not local KVM or VDSM mode, please unregister the hypervisor by webUI
4. run "subscription-manager refresh" on guest	
5. open subscription-manager-gui on guest check "My Subscriptions" tab check "My Installed Software" tab	The attached bonus pool should be revoked. The RHEL installed product cert will become Red

RHEL7-53886 - 3012-[Unlimited] WEBUI - Check the unlimited bonus pool by webUI

Step	Expected Result
***For all hypervisor	
1. find the guest in the SAM/Satellite/Stage candlepin web UI, list guest available subscriptions.	there are only physical pools listed in guest.
2. find the host/hypervisor in web UI, subscribe host/hypervisor to the physical pool whose bonus pool available quantity is unlimited(SKU:RH00060)	
3. find the guest again, list guest available subscriptions again	there are both physical and virtual bonus pool listed in guest, and the available quantity of virtual pools is unlimited.
4. subscribe the bonus pool to guest by	the bonus pool should be attached

web UI	normally.
5. check the consumed bonus pool on guest by CLI and WebUI # subscription-manager refresh # subscription-manager list --co # subscription-manager list --in	after refresh, the bonus pool should be listed by --co

RHEL7-53887 - 3013-[Unlimited] WEBUI - Unsubscribe host by webUI, guest's bonus pool should be revoked

Step	Expected Result
***For all hypervisor	
1. subscribe the physical pool to host by webui(SKU:RH00060)	
2. subscribe the bonus pool on guest by webui	
3. unsubscribe physical pool from host/hypervisor by webui	
4. run "subscription-manager refresh" on guest	
5. check the consumed pool on guest by CLI # subscription-manager refresh # subscription-manager list --co # subscription-manager list --in	The attached bonus pool should be revoked.
6. open/refresh the guest web page	The attached bonus pool should be revoked. List available subscriptions on guest web page, the bonus pools should be not found any more.

RHEL7-53888 - 3014-[Unlimited] WEBUI - Unregister host by webUI, guest's bonus pool should be revoked

Step	Expected Result
***For all hypervisor	
1. subscribe physical pool to host by webui(SKU:RH00060)	
2. subscribe the bonus pool on guest by webui	
3. unregister physical pool from host/hypervisor by webui	
4. run "subscription-manager refresh" on	

guest	
5. check the consumed pool on guest by CLI # subscription-manager refresh # subscription-manager list --co # subscription-manager list --in	The attached bonus pool should be revoked.
6. open/refresh the guest web page	The attached bonus pool should be revoked. List available subscriptions on guest web page, the bonus pools should be not found any more.

RHEL7-53889 - 3015-[Datacenter] Set cpu.cpu_socket and subscribed on host, check the consumed status for KVM / VDSM

Step	Expected Result
***Only for Local_Libvirt, VDSM NOTE: physical Datacenter pool is not designed for any product, so it can not be auto-attached to physical hosts, only can attach by manual.	
1. register the host(hypervisor) to SAM/Satellite/Stage Candlepin	
2. set cpu.cpu_socket(s) to 4 on host # echo '{"cpu.cpu_socket(s)":"4"}' > /etc/rhsm/facts/custom.facts, # subscription-manager facts --update # subscription-manager facts --list	check the cpu_socket should be updated normally
3. check the Datacenter pool id and subscribe it: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a8d725864	should be subscribed successfully
4. check the consumed info on host # subscription-manager list --co # subscription-manager list --in	show the Datacenter pool normally and the status should be as: Status Details: Subscription is current
5. remove the subscribed pool on host # subscription-manager remove --serial=5575032216163770990	
6. subscribe it again with --quantity=1 on host # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a8d725864 --quantity=1	should be subscribed successfully
7. check the consumed info on host # subscription-manager list --co # subscription-manager list --in	show the Datacenter pool normally and the status should be as Status Details: Only supports 2 of 4

	sockets

RHEL7-53890 - 3016-[Datacenter] Set cpu.cpu_socket and subscribed bonus pool on guest, check the consumed status

Step	Expected Result
***For all hypervisor NOTE: Vitual Datacenter pool can be auto attached to the supported product.	
1. register the host(hypervisor) and guest to SAM/Satellite/Stage Candlepin	
2. subscribe the host to a pool which can create a bonus pool, such as the Datacenter pool (RH00002), such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a8d725864	
3. set cpu.cpu_socket(s) to 4 on guest # echo '{"cpu.cpu_socket(s)":"4"}' > /etc/rhsm/facts/custom.facts, # subscription-manager facts --update # subscription-manager facts --list	check the cpu_socket should be updated normally
4. check the unlimited bonus pool id and subscribe it, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a8dad5891	should be subscribed successfully
5. check the consumed info on guest # subscription-manager list --co # subscription-manager list --in	show the Datacenter pool normally and the status should be as: Quantity Used: 1 Status Details: Subscription is current
6. remove the subscribed pool on guest, such as: # subscription-manager remove --serial=5575032216163770990	
7. subscribe it again with --quantity=1 on guest, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a8dad5891--quantity=1	should be subscribed successfully
8. check the consumed info on guest # subscription-manager list --co # subscription-manager list --in	show the Datacenter pool normally and the status should be as Status Details: Subscription is current

RHEL7-53891 - 3017-[Datacenter] Check repos in Host and Guest when host has subscribed

Step	Expected Result
***For all hypervisor	
1. On the Host: subscribe to the DataCenter: #subscription-manager subscribe --pool=[DataCenter subscription pool id]	Subscribe successfully to the DataCenter subscription pool
2. On the Guest: attach the bonus.	
3. if your host is kvm or vdsm, run the command : #subscription-manager repos --list	It should display "This system has no repositories available through subscriptions." , No repos have been added to redhat.repo
4. if your host is kvm or vdsm, run the command: #rct cat-cert /etc/pki/entitlement/<serial>.pem	It should show the Entitlement Certificate information, but NO Content Sets.
5. On the Guest, run the command : #subscription-manager repos --list	Stage:It should display a lot of RHEL repos. Satellite: It should show "This system has no repositories available through subscriptions."
6. On the Guest, run the command: #yum repolist	It should display a lot of RHEL repos and available package counts
7. On the Guest, run the command: #rct cat-cert /etc/pki/entitlement/<serial>.pem [NOTE:] : In the HyperV, ESX,RHEVM, it just need to check the repos in the guest	It should show the Entitlement Certificate information, it also with many Content Sets.

RHEL7-53892 - 3018-[Datacenter] GUI - Set cpu.cpu_socket and subscribed on host, check the consumed status for KVM / VDSM

Step	Expected Result
***only for Local Libvirt, VDSM	
1. register the host(hypervisor) to SAM/Satellite/Stage Candlepin	
2. set cpu.cpu_socket(s) to 4 on host # echo '{"cpu.cpu_socket(s)":"4"}' > /etc/rhsm/facts/custom.facts, # subscription-manager facts --update # subscription-manager facts --list	check the cpu_socket should be updated normally
3. open subscription-manager-gui, click update, and subscribe "Datacenter pool" by default	should be subscribed successfully

4. check the consumed info on host # subscription-manager list --co # subscription-manager list --in	show the Datacenter pool normally and the status should be as: Status Details: Subscription is current
5. remove the subscribed pool on host # subscription-manager remove --serial=5575032216163770990	
6. open subscription-manager-gui, click update, and subscribe "Datacenter pool" with quantity=1	should be subscribed successfully
7. check the consumed info on host # subscription-manager list --co # subscription-manager list --in	show the Datacenter pool normally and the status should be as Status Details: Only supports 2 of 4 sockets

RHEL7-53893 - 3019-[Limited] Check limited bonus pool creation

Step	Expected Result
***for all hypervisor	Refer to BZ 1379926
1. prepare a host, two guests	
2. register host and guests to Sam/Satellite/Stage	
3. subscribe the host to a limit pool, such as (RH00204) # subscription-manager subscribe --pool=$Poolid	what is a limit pool? its bonus pool available quantity is 1, the avaiable quantity can be inquired by the following command # curl -u stage_test_12:redhat -k https://subscription.rhn.stage.redhat.com/subscription/products/$productID|python -mjson.tool
4. list the available pools on two guests # subscription-manager list --available	there are both physical and virtual entitlement pools listed, and the available quantity of virtual pools is 1.
5. in the first guest, subscribe the bonus pool which created by the host # subscription-manager subscribe --pool=$Poolid	subscribe the first guest to the bonus pool successfully
6. In the second guest, list available entitlement pools # subscription-	there are only available physical pools listed, because the bonus pool is only 1 and consumed by guest1

manager list --available	

RHEL7-53894 - 3020-[Limited] WEBUI - Check limited bonus pool by webUI

Step	Expected Result
***for all hypervisor	Refer to BZ 1379926
1. prepare a host, two guests	
2. register host and guests to Sam/Satellite/Stage	
3. subscribe the host to a limit pool by web UI, such as (RH00204)	
4. list the available pools on two guests in web UI	there are both physical and virtual entitlement pools listed, and the available quantity of virtual pools is 1.
5. in the first guest, subscribe the bonus pool by web UI	subscribe the first guest to the bonus pool successfully
6. In the second guest, list available entitlement pools in web UI	there are only available physical pools listed, because the bonus pool is only 1 and consumed by guest1

RHEL7-53895 - 3021-[Instance] Set cpu.cpu_socket to 1 on host, subscribe instance base pool to host for KVM / VDSM

Step	Expected Result
***only for Local Libvirt, VDSM	
1. register host to /Sam/Satellite/Stage	
2. make sure the cpu.cpu_socket(s) is 1 on host: # cat /etc/rhsm/facts/custom.facts {"cpu.cpu_socket(s)":"1"} # subscription-manager facts --update	
3. subscribe instance base pool (RH00003) to host without --quantity option, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2	
4. check status by --co / --in # subscription-manager list --co # subscription-manager list --in	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed

5. remove above subscribed pool: # subscription-manager remove --all	
6. subscribe instance base pool (RH00003) to host with --quantity=1 option again, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=1	subscribe failed: Subscription 'Red Hat Enterprise Linux Server, Premium (Physical or Virtual Nodes)' must be attached using a quantity evenly divisible by 2
7. remove above subscribed pool: # subscription-manager remove --all	
8. subscribe instance base pool (RH00003) to host with --quantity=2 option again, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=2	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed

RHEL7-53896 - 3022-[Instance] Set cpu.cpu_socket to 8 on host, subscribe instance base pool to host with quantity for KVM / VDSM

Step	Expected Result
***only for Local Libvirt, VDSM	
1. register host to /Sam/Satellite/Stage	
2. make sure the cpu.cpu_socket(s) is 8 on host: # cat /etc/rhsm/facts/custom.facts {"cpu.cpu_socket(s)":"8"} # subscription-manager facts --update	
3. subscribe instance base pool (RH00003) to host, don't use --quantity option, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2	
4. check status by --co / --in # subscription-manager list --co # subscription-manager list --in	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed
5. remove above subscribed pool: # subscription-manager remove --all	
6. subscribe instance base pool (RH00003) to host with --quantity=1 option, such as: # subscription-manager subscribe --	subscribe failed: Subscription 'Red Hat Enterprise Linux Server, Premium (Physical or Virtual Nodes)' must be attached using a quantity

pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=1	evenly divisible by 2
7. remove above subscribed pool: # subscription-manager remove --all	
8. subscribe instance base pool (RH00003) to host with --quantity=2 option again, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=2	subscribe normally: The --co status should be: Status Details: Only supports 2 of 8 sockets. The --in status should be: Status: Partially Subscribed Status Details: Only supports 2 of 8 sockets.
9. subscribe instance base pool (RH00003) to host with --quantity=6 option, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=6	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed

RHEL7-53897 - 3023-[Instance] Set cpu.cpu_socket to 8 on host, subscribe instance base pool to host with auto for KVM / VDSM

Step	Expected Result
***only for Local Libvirt, VDSM	
1. register host to /Sam/Satellite/Stage	
2. make sure the cpu.cpu_socket(s) is 8 on host: # cat /etc/rhsm/facts/custom.facts {"cpu.cpu_socket(s)":"8"} # subscription-manager facts --update	
3. subscribe instance base pool (RH00003) to host, don't use --quantity option, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2	
4. check status by --co / --in # subscription-manager list --co # subscription-manager list --in	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed
5. remove above subscribed pool: # subscription-manager remove --all	
6. subscribe instance base pool	subscribe failed:

(RH00003) to host with --quantity=1 option, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=1	Subscription 'Red Hat Enterprise Linux Server, Premium (Physical or Virtual Nodes)' must be attached using a quantity evenly divisible by 2
7. remove above subscribed pool: # subscription-manager remove --all	
8. subscribe instance base pool (RH00003) to host with --quantity=2 option again, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=2	subscribe normally: The --co status should be: Status Details: Only supports 2 of 8 sockets. The --in status should be: Status: Partially Subscribed Status Details: Only supports 2 of 8 sockets.
9. subscribe instance base pool (RH00003) to host with --auto option, such as: # subscription-manager subscribe --auto	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed

RHEL7-53898 - 3024-[Instance] Set cpu.cpu_socket to 1 on guest, subscribe instance base pool to guest

Step	Expected Result
***for all hypervisor	
1. register guest to /Sam/Satellite/Stage	
2. make sure the cpu.cpu_socket(s) is 1 on guest: # cat /etc/rhsm/facts/custom.facts {"cpu.cpu_socket(s)":"1"} # subscription-manager facts --update	
3. subscribe instance base pool (RH00003) to guest without --quantity option, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2	
4. check status by --co / --in # subscription-manager list --co # subscription-manager list --in	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed
5. remove above subscribed pool:	

# subscription-manager remove --all	
6. subscribe instance base pool (RH00003) to guest with --quantity=1 option again, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=1	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed
7. remove above subscribed pool: # subscription-manager remove --all	
8. subscribe instance base pool (RH00003) to guest with --quantity=2 option again, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=2	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed

RHEL7-53899 - 3025-[Instance] Set cpu.cpu_socket to 8 on guest, subscribe instance base pool to guest

Step	Expected Result
***for all hypervisor	
1. register guest to /Sam/Satellite/Stage	
2. make sure the cpu.cpu_socket(s) is 8 on guest # cat /etc/rhsm/facts/custom.facts {"cpu.cpu_socket(s)":"8"} # subscription-manager facts --update	
3. subscribe instance base pool (RH00003) to guest without --quantity option, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2	
4. check status by --co / --in # subscription-manager list --co # subscription-manager list --in	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed
5. remove above subscribed pool: # subscription-manager remove --all	
6. subscribe instance base pool (RH00003) to guest with --quantity=1 option, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be:

--quantity=1	Status: Subscribed
7. remove above subscribed pool: # subscription-manager remove --all	
8. subscribe instance base pool (RH00003) to guest with --quantity=2 option again, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=2	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed
9. subscribe instance base pool (RH00003) to guest with --quantity=6 option, such as: # subscription-manager subscribe --pool=8a99f9814f99ff5e014faa9a7f5e56d2 --quantity=6	subscribe normally: The --co status should be: Status Details: Subscription is current The --in status should be: Status: Subscribed

RHEL7-53900 - 3026-[Instance] GUI - Check instance base quantity on guest

Step	Expected Result
***for all hypervisor	
1. prepare a guest and register to Sam/Satellite/Stage	
2. check the available instance quantity by: # subscription-manager list --av	such as: the instance quantity is 20 before subscribed. In the guest1 the available quantity should be -1 My Subscriptions should include 1 attached Instance-Based subscription that is compliant (no warning icon is present and the Status Details should be empty). My Installed Product tab should show the provided RHEL product is green
3. check the available instance quantity by: #subscription-manager-gui	such as: the instance quantity is 20 before subscribed.
4. Go to "All Available Subscription" tab, click "update" button.	
5. Choose the Instance base subscription , click "attach" button.	
6. Go to "My subscriptions" tab, check the consumed subscription.	My Subscriptions should include 1 attached Instance-Based subscription that is compliant (no warning icon is present

	and the Status Details should be empty).
7. Go to "My Installed Software" tab, check the installed software.	My Installed Product tab should show the provided RHEL product is green
8. check the available instance quantity again by: # subscription-manager list --av	the available quantity should be -1 (19)

RHEL7-53901 - 3027-[Instance] GUI- Set cpu.cpu_socket to 1 on guest, subscribe instance base pool to guest

Step	Expected Result
***for all hypervisor	
1.Check the available subscription in the guest1. #subscription-manager-gui	
2. Go to "All Available Subscription" tab, click "update" button.	It will show the Instancebase subscription
3. Choose the Instancebase subscription , click "attach" button.	Subscribe success.
4. Go to "My subscriptions" tab, check the consumed subscription.	My Subscriptions should include 1 attached Instance-Based subscription that is compliant (no warning icon is present and the Status Details should be empty).
5. Go to "My Installed Software" tab, check the installed software.	My Installed Product tab should show the provided RHEL product is green

RHEL7-53902 - 3028-[Instance] GUI - Set cpu.cpu_socket to 8 on guest, subscribe instance base pool to guest

Step	Expected Result
***for all hypervisor	
1. Make the guest1's socket to 8 # cat /etc/rhsm/facts/custom.facts {"cpu.cpu_socket(s)":"8"} # subscription-manager facts --update	guest1's socket has been modified to 8 cpu_socket(s) :8
2.check the available subscription in the guest1. #subscription-manager-gui	subscription-manager can be bring up.
3. go to "All Available Subscription" tab, click "update" button.	It will show the Instancebase subscription
4. choose the Instancebase subscription ,	subscribe success.

and change the quantity to 1, then click "attach" button.	
5. go to "My subscriptions" tab, check the consumed subscription.	My Subscriptions should include 1 attached Instance-Based subscription that is compliant (no warning icon is present and the Status Details should be empty).
6. go to "My Installed Software" tab, check the installed software.	My Installed Product tab should show the provided RHEL product is green

RHEL7-53903 - 3029-[Instance] GUI - Set cpu.cpu_socket to 1 on host, subscribe instance base pool to host by gui for KVM / VDSM

Step	Expected Result
***only for Local Libvirt, VDSM	
1. register host to /Sam/Satellite/Stage	
2. make sure the cpu.cpu_socket(s) is 1 on host: # cat /etc/rhsm/facts/custom.facts {"cpu.cpu_socket(s)":"1"} # subscription-manager facts --update	
3. subscription-manager-gui #subscription-manager-gui go to "All Available Subscription" tab, click "update" button.	
4. Choose the Instancebase subscription , modify the quantity spinner to 1, click "attach" button.	Can't mofified it to 1
5. Choose the Instancebase subscription , modify the quantity spinner to 2, click "attach" button.	Modify successful
6. Click "attach" button.	Subscribe success.
7. Go to "My subscriptions" tab, check the consumed subscription.	My Subscriptions should include 1 attached Instance-Based subscription that is compliant (no warning icon is present and the Status Details should be empty).
7. Go to "My Installed Software" tab, check the installed software.	My Installed Product tab should show the provided RHEL product is green

RHEL7-53904 - 3030-[Instance] GUI - Set cpu.cpu_socket to 8 on host, subscribe instance base pool to host by quantity for KVM / VDSM

Step	Expected Result

***only for Local Libvirt, VDSM	
1. register host to /Sam/Satellite/Stage	
2. make sure the cpu.cpu_socket(s) is 8 on host: # cat /etc/rhsm/facts/custom.facts {"cpu.cpu_socket(s)":"8"} # subscription-manager facts --update	
3. subscription-manager-gui #subscription-manager-gui go to "All Available Subscription" tab, click "update" button.	
4. Choose the Instancebase subscription , modify the quantity spinner to 1, click "attach" button.	Can't mofified it to 1
5. Choose the Instancebase subscription , modify the quantity spinner to 2, click "attach" button.	Modify successful
6. Go to "My subscriptions" tab, check the consumed subscription.	My Subscriptions tab for the attached subscription is yellow with a Status Details explanation that says "Only covers 2 of 8 sockets
7. Go to "My Installed Software" tab, check the installed software.	My Installed Product tab should show the provided RHEL product Status is "PartiallSubscribed".
8. Choose the Instancebase subscription , modify the quantity spinner to 6, click "attach" button.	
9. Go to "My subscriptions" tab, check the consumed subscription.	My Subscriptions tab for the attached subscription is green with a Status Details is empty.
10. Go to "My Installed Software" tab, check the installed software.	My Installed Product tab should show the provided RHEL product is product Status is "Subscribed".

RHEL7-53905 - 3031-[EXPT] Validate guest compliance when guest registered to diff server

Step	Expected Result
***for all hypervisor NOTE: Make sure there is a host and two guests. host and guest1 registered to the same server. Guest2 registered to different server.	Refer to: BZ1347184

1. Register system to server1.	
2. Configure virt-who run at any mode.	
3. Restart virt-who and check virt-who's log	Virt-who can send host/guest mapping info to server1.
4. Register guest1 to server1.	
5. Register guest2 to server2.	
6. Host1. subscribe pool which can generate bonus pool.(eg: datacenter pool)	
7. Guest1. Check available pool on the guest1 # subscription-manager list --available	It will show datacenter bonus pool on guest1.
8. Guest2. Check available pool on the guest1 # subscription-manager list --available	It won't show datacenter bonus pool on guest2.

RHEL7-99882 - 3032-[Datacenter] The datacenter bonus pool can be subscribed by auto on guest

Step	Expected Result
***For all hypervisor	
1. Register the host(hypervisor) and guest to SAM/Satellite/Stage Candlepin	Host/Hypervisor register successfully . ***On server WebUI, hosts/hypervisors that do NOT have a subscription attached should be RED under content hosts.** ***Bug 1336924 existing with satellite servier.
2. Subscribe the host/hypervisor to datacenter physical pool (RH00002) which can create a bonus pool (RH00050), # subscription-manager subscribe --pool=pool_id	Host/Hypervisor subscribe successfully.
3. Check the datacenter bonus pool on guest # subscription-manager refresh # subscription-manager list --av	The Datacenter bonus pool shoud be created.
4. Subscribe guest to the datacenter bonus pool by auto, such as? # subscription-manager subscribe --auto	should be subscribed successfully. ***On server WebUI, hosts/hypervisors that have subscription attached should be GREEN under content hosts.**
5. Check the consumed info on guest	should show the datacenter bonus pool

should show the unlimited bonus pool # subscription-manager list --co # subscription-manager list --in	and the status should be as: Status Details: Subscription is current quantity xxxxxxxxxx ***Bug 1524528 existing

RHEL7-110509 - 3033 - Temporary bonus pool can be subscribed on guest

Step	Expected Result
***for all hypervisors	
1. Stop virt-who service # systemctl stop virt-who	
2. Register guest to SAM/Satellite/Stage Candlepin.	register successfully.
3. Check the available pool on guest # subscription-manager list --av	should list all available physical and vitual pool, and the vitual bonus pool type should be temporary, such as: Subscription Name: Red Hat Enterprise Linux for Virtual Datacenters, Standard (DERIVED SKU) Provides: dotNET on RHEL (for RHEL Server) Oracle Java (for RHEL Server) Red Hat Developer Toolset (for RHEL Server) Red Hat Enterprise Linux Atomic Host Beta Red Hat Software Collections Beta (for RHEL Server) Red Hat Software Collections (for RHEL Server) Red Hat Enterprise Linux Server Red Hat Enterprise Linux Atomic Host Red Hat Beta SKU: RH00050 Contract: 11261867 Pool ID: 8ac983275f148d96015f14a1f3e2039a Provides Management: Yes Available: Unlimited Suggested: 1 Service Level: Standard Service Type: L1-L3 Subscription Type: Stackable (Temporary) Ends: 02/26/2018

	System Type: Virtual
4. Subscribe the temporary Datacenter virtual pool on guest by pool_id # subscription-manager attach --pool 8ac983275f148d96015f14a1f3e2039a	subscribe successfully
5. Check the consumed status on guest # subscription-manager list --co	"Status Details" will give warning/note about the temporary subscription, such as: +----------+ Consumed Subscriptions +----------+ Subscription Name: Red Hat Enterprise Linux for Virtual Datacenters, Standard (DERIVED SKU) Provides: dotNET on RHEL (for RHEL Server) Red Hat Beta Red Hat Enterprise Linux Atomic Host Red Hat Enterprise Linux Atomic Host Beta Oracle Java (for RHEL Server) Red Hat Developer Toolset (for RHEL Server) Red Hat Software Collections (for RHEL Server) Red Hat Enterprise Linux Server Red Hat Software Collections Beta (for RHEL Server) SKU: RH00050 Contract: 11261867 Account: 5758125 Serial: 4788461776092549700 Pool ID: 8ac983275f148d96015f14a1f3e2039a Provides Management: Yes Active: True Quantity Used: 1 Service Level: Standard Service Type: L1-L3 Status Details: Guest has not been reported on any host and is using a temporary unmapped guest subscription. Subscription Type: Stackable (Temporary) Starts: 02/26/2017 Ends: 10/24/2017 System Type: Virtual
6. Start virt-who service to send host-guest mapping to server.	

7. Check the available pool on guest again # subscription-manager list --av	all the temporary virtual pool disappear
8. Run "# subscription-manager refresh" on guest, then check the consumed status # subscription-manager list --co	the subscribed temporary Datacenter virtual pool disappear
9. Attach Datacenter physical pool for host/hypervisor	
10. Check the available pool on guest # subscription-manager list --av	should show the non-temporary Datacenter bonus pool.
11. Subscribe the Datacenter virtual pool on guest by pool_id # subscription-manager attach --pool [POOL_ID]	subscribe successfully ***Bug 1524528 existing

4 . Virt-who Performance cases

RHEL7-53907 - 4001-[Perf] Run virt-who with multi hosts/guests

Step	Expected Result
1. prepare 8+ hosts	
2. make sure virt-who is configured for all these hosts/hypervisors	
2. add 20 guests for each hosts run virt-who with interval time 0 run virt-who with interval time 5	check the cpu and mem usage for different interval time check one shot time
3. add 50 guest for each hosts run virt-who with interval time 0 run virt-who with interval time 5	check the cpu and mem usage for different interval time check one shot time
4. add 100 guest for each hosts run virt-who with interval time 0 run virt-who with interval time 5	check the cpu and mem usage for different interval time check one shot time

RHEL7-53908 - 4002-[[Perf] Run virt-who with 100+ config files

Step	Expected Result
1. create 100+ config files in /etc/virt-who.d	
2. run virt-who with interval time 0	check the cpu and mem usage for different interval time

run virt-who with interval time 5 run virt-who with oneshot	check the host/guests mapping info normally check one shot time

RHEL7-53909 - 4003-[[Perf] Run virt-who with 24+ hours

Step	Expected Result
1. config virt-who with VIRTWHO_INTERVAL 24 hours, such as: VIRTWHO_INTERVAL=86400	
2. restart virt-who and check the rhsm.log	virt-who can be started normally within 24h, should be no any new host/guests mapping info found from rhsm.log

RHEL7-53910 - 4004-[[Perf] Check memory leak after long-term running

Step	Expected Result
1.configure virt-who, enable debugging # vi /etc/sysconfig/virt-who VIRTWHO_BACKGROUND=1 VIRTWHO_DEBUG=1	after step2: virt-who can be started normally after step3: there isn't memory leak during one day after step4: there isn't memory leak during three days after step5: there isn't memory leak during one week
2. restart virt-who service # service virt-who restart	
3. Monitor the memory usage for one day	
4. Monitor the memory usage for three day	
5. Monitor the memory usage for one week	

RHEL7-53911 - 4005-[[Perf] Check /var/log/rhsm/rhsm.log file size

Step	Expected Result
1. check /var/log/rhsm/rhsm.log file size	the log file should be split

5 . Other cases

RHEL7-53913 - 5001-[kvm] Check virt-who support libvirt remote mode

Step	Expected Result
***only for remote_libvirt	
1. prepare two rhel hosts and register to Sam/Satellite/Stage (host1 and host2)	
2. In host1, copy the ssh-key to the host2 hosts # ssh-keygen # ssh-copy-id -i ~/.ssh/id_rsa.pub HOST2_IP	
3. Configure virt-who run at remote libvirtd mode VIRTWHO_LIBVIRT=1 VIRTWHO_LIBVIRT_OWNER=ACME_Corporation VIRTWHO_LIBVIRT_ENV=Library VIRTWHO_LIBVIRT_SERVER=qemu+ssh://HOST2_IP/system VIRTWHO_LIBVIRT_USERNAME=root VIRTWHO_LIBVIRT_PASSWORD=redhat	Check message "Protocol is not specified in libvi qemu+ssh://" Set VIRTWHO_LIBVIRT_SERVER=qemu+ssh://HO message does not exit Set VIRTWHO_LIBVIRT_SERVER=HOST2_IP messsage exist.
4. restart virt-who service # systemctl restart virt-who # systemctl status virt-who	
5. Check the virt-who in the /var/log/rhsm/rhsm.log	it should display host/guest associations info in t
6. Open SAM web UI,Check the host/guest association	the hypervisor has been added to SAM server,

RHEL7-53914 - 5002-[kvm] Check virt-who threads after configure libvirt option

Step	Expected Result
***Only for libvirt mode	
1. configure libvirt as the following: # cat /etc/libvirt/libvirtd.conf listen_tls = 0 listen_tcp = 1 auth_tcp = "sasl" tcp_port = "16509"	
2. restart libvirtd service # service libvirtd restart	
3. check the number of virt-who thread, such as # ps -ef | grep virt-who root 1510 1 1 10:44 ? 00:02:14 /usr/bin/python /usr/share/virt-who/virtwho.py	virt-who's thread number should be no changes

# ls /proc/1510/task/ | wc -l 2 # ls /proc/1510/task/ | wc -l 2 # ls /proc/1510/task/ | wc -l 2	

RHEL7-53915 - 5003 - Check virt-who config file exist after reboot virt-who host

Step	Expected Result
***For all hypervisor	
1.Register virt-who system to SAM/Satellite/Stage Candlepin	
2. Configure virt-who by /etc/sysconfig/virt-who, such as: # vi /etc/sysconfig/virt-who VIRTWHO_DEBUG=1 VIRTWHO_XEN=1 VIRTWHO_XEN_OWNER=Default_Organization VIRTWHO_XEN_ENV=Library VIRTWHO_XEN_SERVER=10.73.5.212 VIRTWHO_XEN_USERNAME=root VIRTWHO_XEN_PASSWORD=Welcome1	
3. Create config file by /etc/virt-who.d/xxx.conf, such as: # vi /etc/virt-who.d/xen.conf [sat-xen] type=xen owner=Default_Organization env=Library server=10.73.5.212 username=root password=Welcome	
4. Configure /etc/vit-who.conf, such as: # vi /etc/virt-who.conf [global] interval=60 debug=True	
5. Restart virt-who service, then reboot virt-who host.	Both before and after reboot system, virt-who report host/guest mappings normally. All the configure in step2-3 should be no change.

RHEL7-53916 - 5004-[vdsm] Check guest consumed status when pause/poweron/off by auto assigned for vdsm mode

Step	Expected Result

***Only for VDSM mode	
1. prepare two vdsm hosts (host1, host2) => add these hosts to rhevm => add a guest to host1	
2. make sure host1 and guest1 register to Sam/Satellite/Stage	
3. configure virt-who on host1 for vdsm mode # vi /etc/sysconfig/virt-who VIRTWHO_VDSM=1	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	should show the host1/guest1 mapping info
5. subscirbe a physical pool to host1, subscribe the bonus pool to host1' s guest1	host1 and guest1 should be subscribed normally.
6. make the guest1 pasue/poweoff/poweron by auto assigned	if the guest1 is still assign to host1 by auto, the mapping info should be no changed, the consumed bonus should be not revoked. if the guest1 is assign to host2 by auto, the mapping info should be changed, the consumed bonus should be revoked and maybe it will subscribe a new bonus pool again

RHEL7-53917 - 5005-[rhevm] Check guest consumed status when pause/poweron/off by auto assigned for rhevm mode

Step	Expected Result
***Only for RHEVM mode	
1. prepare two vdsm hosts (host1, host2) => add these hosts to rhevm => add a guest to host1	
2. make sure host1 and guest1 register to Sam/Satellite/Stage	
3. configure virt-who on host1 for rhevm mode # vi /etc/sysconfig/virt-who VIRTWHO_RHEVM=1 VIRTWHO_RHEVM_OWNER=ACME_Corporation VIRTWHO_RHEVM_ENV=env1	

VIRTWHO_RHEVM_SERVER=10.66.79.91 VIRTWHO_RHEVM_USERNAME=admin VIRTWHO_RHEVM_PASSWORD=redhat	
4. restart virt-who service and check rhsm.log # systemctl restart virt-who # tail -f /var/log/rhsm/rhsm.log	should show the host1/guest1 mapping info
5. subscirbe a physical pool to host1, subscribe the bonus pool to host1' s guest1	host1 and guest1 should be subscribed normally.
6. make the guest1 pasue/poweoff/poweron by auto assigned	if the guest1 is still assign to host1 by auto, the mapping info should be no changed, the consumed bonus should be not revoked. if the guest1 is assign to host2 by auto, the mapping info should be changed, the consumed bonus should be revoked and maybe it will subscribe a new bonus pool again

RHEL7-53918 - 5006-[Hyper-v] Check Hyper-v AllowUnencrypted option for virt-who connection

Step	Expected Result
***Only for Hyper-V	
1. Install Group Policy Management in hyper-v server => on the Start screen, click the Server Manager => In the Quick Start display, click Add roles and features . Follow the Add roles and features wizard to add the Group Policy Management feature. and Click Install .	How to manage GPO on Windows 2012: https://mojo.redhat.com/docs/DOC-1065029 or run gpedit.msc in cmd
2. Open Group Policy Management Expand: -> "Domains " -> "ent.com " -> "Group Policy Objects" -> "Default Domain Policy" Right Click "Default Domain Policy" and select "Edit...", this will open the "Group Policy Management Editor", Expand: -> "Computer Configuration" -> "Administrative Template" -> "Windows Components" -> "Windows Remote Management" -> "WinRM Service"	if the ent.com GPO is invalid, please run "local group policy editor"

3. Right Click "Allow unencrypted traffic" option, set it to "Enabled", and the run "gpupdate" on cmd to update the policy, and then run "winrm get winrm/config" on cmd to check the config	AllowUnencrypted should be: AllowUnencrypted = true [Source="GPO"]
4. config virt-who for hyper-v and restart virt-who # vi /etc/sysconfig/virt-who VIRTWHO_HYPERV=1 VIRTWHO_HYPERV_OWNER=7661967 VIRTWHO_HYPERV_ENV=7661967 VIRTWHO_HYPERV_SERVER=10.66.129.68 VIRTWHO_HYPERV_USERNAME="ENT\administrator" VIRTWHO_HYPERV_PASSWORD=Welcome1	can connect to hyper-v normally, virt-who can fetch the host/guests info from hyper-v and send it to Sam/Satellite/Stage server
5. Right Click "Allow unencrypted traffic" option, set it to "Disabled", and the run "gpupdate" on cmd to update the policy, and then run "winrm get winrm/config" on cmd to check the config	AllowUnencrypted should be: AllowUnencrypted = false [Source="GPO"]
6. config virt-who for hyper-v and restart virt-who again	can't connect to hyper-v normally
7. Right Click "Allow unencrypted traffic" option, set it to "Not Configured", and the run "gpupdate" on cmd to update the policy, and then run "winrm get winrm/config" on cmd to check the config	AllowUnencrypted should be: AllowUnencrypted = true
8. config virt-who for hyper-v and restart virt-who again	can connect to hyper-v normally, virt-who can fetch the host/guests info from hyper-v and send it to Sam/Satellite/Stage server

RHEL7-53919 - 5007-[ESX] Check the virt-who log out of vcenter after stop virt-who service

Step	Expected Result
***Only for ESX	Refer to BZ 1249928
1. Register system to server	
2. Open https://[vcenterip]/mob/?moid=SessionManager	Show all usersession
3. Configure virt-who run at esx mode and restart virt-who service	
4. Open https://[vcenterip]/mob/?moid=SessionManager	It will increase one usersession
5. Stop virt-who service, then open https://[vcenterip]/mob/?moid=SessionManager	The new usersession which generated on step4 is not exist. the number of usersession is the same as step 2

RHEL7-53920 - 5008-[Satellite] Check unlimited bonus-pool generation when register system with an active key

Step	Expected Result
***For all hypervisor ***Only for Satellite server	
1. Create activation key on satellite webui. Path: WebUI -> Content -> Activation Keys -> New Activation Key Specify the name, such as 'virt-who'; Environment, check the 'Library'; Content View, select 'Default Organization View'	activation key should be created successfully.
2. Register host and guest to satellite server with active key(virt-who), such as: # subscription-manager register --org="Default_Organization"--activationkey="virt-who"	host and guest can be registered to satellite successfully.
3. List available pool on the guest. # subscription-manager list --available	there are only available physical pools listed.
4. Subscribe host/hypervisor to one physical pool whose bonus pool available quantity is unlimited.(eg. "Resilient Storage for Unlimited Guests") # subscription-manager subscribe --pool=$Poolid	subscribe host/hypervisor to the pool successfully
5. List available pools on the guest. # subscription-manager list --available	there are both physical and virtual pools listed, and the available quantity of virtual pools is unlimited.

RHEL7-61430 - 5009-[Satellite5.X] Check virt-who send hyperviosr to server when server hasn't syn any related channel

Step	Expected Result
***for all hypervisor NOTE: Make sure satellite hasn't syn any redhat channel	Refer to BZ 1245035
1 Register system to satellite5.X	
2 Configure virt-who run at any mode # cat /etc/virt-who.d/virt [test-esx1] type=esx server=10.73.2.95 username=Administrator@vsphere.local #encrypted_password=07928b0a0b0caa7c6e3b5915466210bd	

password=Welcome1! owner=ACME_Corporation env=Library sat_server=10.66.128.78 sat_username=admin sat_password=redhat	
3. Restart virt-who service and check virt-who's log # tail -f /var/log/rhsm/rhsm.log	The host/guests json info should be found for rhsm.log;
4. In satellite webUI, go to "system" tab, click on the hyperviosr which registered by virt-who, check the "Subscribed channels"	The "Hypervisor base" channel has been attached

RHEL7-53922 - 5010-[Satellite5.X] Check virt-who send multi-hypervisors to different server

Step	Expected Result
***for all hypervisor	Refer to BZ 1196576
1. Register system to satellite5.X	
2. Configure virt-who run at two different modes and send host/gust mapping to different satellite server. # cat /etc/virt-who.d/virt [test-esx1] type=esx server=10.73.2.95 username=Administrator@vsphere.local #encrypted_password=07928b0a0b0caa7c6e3b5915466210bd password=Welcome1! owner=ACME_Corporation env=Library sat_server=10.66.128.78 sat_username=admin sat_password=redhat [test-rhevm1] type=rhevm server=https://dell-pe1955-01.rhts.eng.bos.redhat.com:443 username=admin@internal password=redhat owner=ACME_Corporation env=Library sat_server=10.66.128.19 sat_username=admin	

sat_password=redhat	
3. Restart virt-who service and check virt-who's log # tail -f /var/log/rhsm/rhsm.log	The two hypervisors' host/guests json info should be found for rhsm.log; The two hypervisors' json info should be showed at the same time, don't need to wait for so long time, no 60s delay.
4. Open two satellite's webUI, check host/guest mapping info	Hypervisors can show on two satellites individually.

RHEL7-58982 - 5011-[Satellite5.X] Check virt-who send mapping info through satellite proxy with /etc/virt-who.d/xx configure

Step	Expected Result
***not for local_libvirt, vdsm	
1. Register system to satellite5.X proxy	
2. Configure virt-who run any mode and "sat_server" to satellite proxy server. # cat /etc/virt-who.d/virt [test-esx1] type=esx server=10.73.2.95 username=Administrator@vsphere.local #encrypted_password=07928b0a0b0caa7c6e3b5915466210bd password=Welcome1! owner=ACME_Corporation env=Library sat_server=10.66.128.78[satellite proxy server] sat_username=admin sat_password=redhat	
3. Restart virt-who service and check virt-who's log # tail -f /var/log/rhsm/rhsm.log	Virt-who send host/guest mapping info successfully.
4. Open satellite's webUI, check host/guest mapping info	Hypervisors can show on satellites .

RHEL7-58983 - 5012-[Satellite5.X] Check virt-who send mapping info through satellite proxy with /etc/sysconfig/virt-who configure

Step	Expected Result
***not for local_libvirt, vdsm	
1. Register system to satellite5.X proxy	
2. Configure virt-who run any mode and "VIRTWHO_SATELLITE_SERVER" to satellite proxy server. [root@hp-z220-03 ~]# cat /etc/sysconfig/virt-who | grep -v ^# | grep -v ^$ VIRTWHO_DEBUG=1 VIRTWHO_SATELLITE5=1 VIRTWHO_HYPERV=1 VIRTWHO_HYPERV_OWNER=ACME_Corporation VIRTWHO_HYPERV_ENV=Library VIRTWHO_HYPERV_SERVER=10.73.5.233 VIRTWHO_HYPERV_USERNAME=virtwho\\administrator VIRTWHO_HYPERV_PASSWORD=Welcome1 VIRTWHO_SATELLITE_SERVER=rhel67-sat57.redhat.com[satellite proxy server] VIRTWHO_SATELLITE_USERNAME=admin VIRTWHO_SATELLITE_PASSWORD=admin	
3. Restart virt-who service and check virt-who's log # tail -f /var/log/rhsm/rhsm.log	Virt-who send host/guest mapping info successfully.
4. Open satellite's webUI, check host/guest mapping info	Hypervisors can show on satellites .

RHEL7-58984 - 5013-[Satellite5.X] Check virt-who send mapping info through satellite proxy with CLI

Step	Expected Result
***not for local_libvirt, vdsm	
1. Register system to satellite5.X proxy	
2. Configure virt-who run any mode with CLI and "--satellite-serve" is satellite proxy server. # virt-who -d -o --satellite --satellite-server=[satellite proxy server] --satellite-username=admin --satellite-password=admin --esx --esx-owner=Default_Organization --esx-env=Library --esx-server=10.66.78.75 --esx-username=Administrator@vsphere.local --	

esx-password=qwer1234P!	
3. check virt-who's log # tail -f /var/log/rhsm/rhsm.log	Virt-who send host/guest mapping info successfully.
4. Open satellite's webUI, check host/guest mapping info	Hypervisors can show on satellites .

RHEL7-79892 - 5014-[Satellite5.X] Check hypervisor consumed "Hypervisor Base" channel

Step	Expected Result
***not for local libvirt and vdsm	BZ 1141832
1. Register system to satellite5.X.	
2. Run virt-who run at esx/rhevm/hyperv mode with CLI # virt-who -d -o --satellite --satellite-server=[satellite server] --satellite-username=admin --satellite-password=admin --esx --esx-owner=Default_Organization --esx-env=Library --esx-server=10.66.78.75 --esx-username=Administrator@vsphere.local --esx-password=qwer1234P!	
3. Open satellite's webUI, Go to system-->Hypervisor, check the hypervisor's consumed channel	Hypervisor consumed ""Hypervisor Base" channel"

RHEL7-86149 - 5015-[Satellite5.X] Check virt-who can register hypervisor to multi-org

Step	Expected Result
***not for local libvirt and vdsm	
1. Register hypervisor to satellite5.7 by CLI: # virt-who --satellite --satellite-server=10.73.3.225 --satellite-username=admin --satellite-password=redhat --hyperv --hyperv-owner=xxx --hyperv-env=xxx --hyperv-server=10.73.5.216 --hyperv-username=administrator --hyperv-password=Welcome1 -d -o	Bug 1410000
2. Check rhsm log and Satellite5.7 WebUI	- in rhsm log, Host/Guest mapping info can be showed and sent successfully. - on satellite5.7 WebUI, the hypervisor is registered to default org 'Red Hat Czech, s.r.o'.

3. In Satellite5.7 WebUI, create a new org 'test_org' under "Admin -> Create Organization" -Organization Name: test_org -Organization Login*: testadmin -Desired Password*: redhat	the new org should be created normally.
4. Add management entitlement to the new created org - 'test_org'. under Satellite WebUI -> "Admin", click into the 'test_org' -> 'Subscriptions' -> 'System Entitlements', set the Proposed Total values for each Entitlement.	the largest Possible Values can be set to the entitlement.
5. Delete the hypervisor registerted on step1 from Satellite5.7 WebUI.	hypervisor is deleted from satellite5.7 WebUI successfully.
6. Regiter hypervisor to satellite5.7 with new username=admin and password=redhat, which is belong to 'test_org'. # virt-who --satellite --satellite-server=10.73.3.216 --satellite-username=testadmin --satellite-password=redhat --esx --esx-owner=xxx --esx-env=xxx --esx-server=10.73.5.216 --esx-username=Administrator@vsphere.local --esx-password=Welcome1! -o -d	
7. Check rhsm log and Satellite5.7 WebUI	- rhsm log also shows normally. - on satellite5.7 WebUI, the hypervisor is registered to the new 'test_org'.

RHEL7-53923 - 5016-[Candlepin2.0] Check virt-who can handle 429 response from server

Step	Expected Result
***for all hypervisor NOTE: Make sure virt-who can receive 429 response from server. If no 429 code, you need to use the third-party tool to create a fake 429 code for testing. refer to: https://github.com/virt-who/virt-who/pull/103 Take virt-who host (bootp-73-131-133.rhts.eng.pek2.redhat.com) as an example	Refer to BZ1300863 BZ1311884 BZ1286945 BZ1368365 BZ1322201 BZ1448267 BZ1506263
1. download mitmproxy from https://github.com/mitmproxy/mitmproxy/releases to virt-who host	
2. run mitmproxy in virt-who host # ./mitmproxy -b bootp-73-131-133.rhts.eng.pek2.redhat.com --insecure -p 12345	it will make bootp-73-131-133.rhts.eng.pek a proxy server, and the port is 12345
3. Configure mitmproxy's intercept filter: a) press 'i'	it will highlight the GET request contains "jc

b) enter the following (without quotes) as the filter expression: ~bs [jJ]ob ~m GET	
4. register virt-who host to candlepin 2.0	Now stage candlepin was updated to 2.0, y satellite6.3 which includes candlepin2.0 alr
5. create a config file in /etc/virt-who.d/ [esx.conf] type=esx server=10.73.131.198 username=administrator@vsphere.local password=Welcome1! owner=Default_Organization env=Library rhsm_hostname=bootp-73-131-133.rhts.eng.pek2.redhat.com rhsm_port=443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin hypervisor_id=hostname rhsm_proxy_hostname=bootp-73-131-133.rhts.eng.pek2.redhat.com rhsm_proxy_port=12345	make sure: rhsm_proxy_hostname is mitmproxy host: bootp-73-131-133.rhts.eng.pek2.redhat.cor rhsm_proxy_port is mitmproxy port: 12345
6. run virt-who # virt-who -d -i 60	after virt-who start, it will wait for 15 second job state: 2017-10-27 14:45:20,761 [rhsm.connection ..... 2017-10-27 14:45:35,895 [virtwho.destinati
7. Change the code to 429 1). watch mitmproxy as requests come in. It should highlight and intercept any job status calls. 2). Move down to the intercepted call using the arrow keys and press enter 3). Press tab to go to the response 4). Press 'e' and then 'o' to edit the response code, delete the value already there and replace with 429 and press enter 5). Press 'q' a few times to get back to the main screen of mitmproxy, then press 'a' to allow the modified response to be delivered to virt-who	after 429 code is created, watch the rhsm.l show the 429 info and waiting for 30 secon job state again: 2017-10-27 14:38:12,096 [virtwho.destination_448254738510556985 MainProcess(21379):Thread-3 @virt.py:_s 429 encountered while checking job state, "30" ..... 2017-10-27 14:38:42,423 [virtwho.destination_448254738510556985 MainProcess(21379):Thread-3 @subscriptionmanager.py:check_report_st Checking status of job hypervisor_update_0f3c3225-4873-47b6-9
8. Change the code to 429 and set the Retry-After header 1). watch mitmproxy as requests come in. It should highlight and intercept any job status calls. 2). Move down to the intercepted call using the arrow keys and press enter 3). Press tab to go to the response	after 429 code is created and including the After" to 10, it will show 429 info and waitin to check the job state: 2017-10-27 14:49:06,473 [virtwho.destination_448254738510556985 MainProcess(22400):Thread-3 @virt.py:_s 429 encountered while checking job state,

4). Press 'e' and then 'o' to edit the response code, delete the value already there and replace with 429 and press enter 5). Press 'e' and then 'h' to edit the headers 6). Move down to the last header by using the arrow keys and press 'a' to add a new one 7). Add the header 'Retry-After', press tab, type your desired wait time and press enter, such as 10 8). Press 'q' a few times to get back to the main screen of mitmproxy, then press 'a' to allow the modified response to be delivered to virt-who	"10" ..... 2017-10-27 14:49:16,768 [virtwho.destination_448254738510556985 MainProcess(22400):Thread-3 @subscriptionmanager.py:check_report_st Checking status of job hypervisor_update_183676be-091b-41e2-bcc8-350a0610b6b0
8, change the code to 404 or 500 1). watch mitmproxy as requests come in. It should highlight and intercept any job status calls. 2). Move down to the intercepted call using the arrow keys and press enter 3). Press tab to go to the response 4). Press 'e' and then 'o' to edit the response code, delete the value already there and replace with 404 and press enter 5). Press 'q' a few times to get back to the main screen of mitmproxy, then press 'a' to allow the modified response to be delivered to virt-who	after 404 or 500 code is created, virt-who w message: ManagerError: Communication with subscr failed with code 500:

RHEL7-53924 - 5017-[EXPT] Check guest attribute after add/delete/pause/resume a non-rhel guest.

Step	Expected Result
***for all hypervisor NOTE: Make sure there is one guest on host.	Refer to BZ 1353074
1. Register system to server.	
2. Configure virt-who run at any mode and refresh interval is 60s	
3. Restart virt-who service and check virt-who's log. # service virt-who restart && tail -f /var/log/rhsm/rhsm.log	Virt-who send correct host/guest(1 guest) mapping info to server.
4. Add a windows guest.	
5. Restart virt-who service and check virt-who's log.	Add a new guest on host. virt-who send correct host/guest(2 guests) mapping info to

# service virt-who restart && tail -f /var/log/rhsm/rhsm.log	server.
6. Pause windows guest. Restart virt-who service and check virt-who's log. # service virt-who restart && tail -f /var/log/rhsm/rhsm.log	Virt-who send correct host/guest(2 guests) mapping info to server. The windows guest's "status" has updated to "3": { "guestId": "42098426-0d49-7dc6-0cb7-2331f149b8aa", "state": 3, "attributes": { "active": 1, "virtWhoType": "esx", "hypervisorType": "vmware" } } [NOTE]: In RHEVM/VDSM mode, windows guest should not exist after pause it.
7. Resume windows guest. Restart virt-who service and check virt-who's log. # service virt-who restart && tail -f /var/log/rhsm/rhsm.log	Virt-who send correct host/guest(2 guests) mapping info to server. The windows guest's "status" has updated to "1": { "guestId": "42098426-0d49-7dc6-0cb7-2331f149b8aa", "state": 1, "attributes": { "active": 1, "virtWhoType": "esx", "hypervisorType": "vmware" } }
8. Stop windows guest. Restart virt-who service and check virt-who's log. # service virt-who restart && tail -f /var/log/rhsm/rhsm.log	Virt-who send correct host/guest(2 guests) mapping info to server. The windows guest's "status" has updated to "3": { "guestId": "42098426-0d49-7dc6-0cb7-2331f149b8aa", "state": 5, "attributes": {

	"active": 0, "virtWhoType": "esx", "hypervisorType": "vmware" } } [NOTE]: In RHEVM/VDSM mode, windows guest should not exist after stop it.
9. Delete windows guest. Restart virt-who service and check virt-who's log. # service virt-who restart && tail -f /var/log/rhsm/rhsm.log	Virt-who send correct host/guest(1 guests) mapping info to server. The windows guest shouldn't exist on mapping info.

RHEL7-79899 - 5018-[EXPT] Check virt-who run normally after enable FIPS

Step	Expected Result
***not for hyper-v mode	Refer to BZ 1349640 Bug 1405897
1. Prepare one rhel host with virt-who installed.	
2. Enable FIPS on the virt-who host following below instruction: 1). # vi /etc/sysconfig/prelink PRELINKING=no note: if no the prelink file, need to "#yum install prelink" by manual # prelink -u -a 2). # yum install dracut-fips -y # dracut -f 3). edit grub file - for rhel6: edit /boot/grub/grub.conf, add: fips=1 boot=/dev/sda1 - for rhel7: (1). edit /etc/default/grub, add 'fips=1 boot=/dev/sda1' to line - 'GRUB_CMDLINE_LINUX' (2). # grub2-mkconfig -o /boot/grub2/grub.cfg 4) reboot and check # cat /proc/sys/crypto/fips_enabled 1	- hyper-v mode is not supported??? - Succeed to enable FIPS mode.

2. Restart virt-who service and check virt-who's log	Virt-who restart successfully. It can send host/guest mapping info to server successfully. ***Bug 1526330 for hyperv, "ValueError: unsupported hash type"

RHEL7-95007 - 5019 - [rhevm] Check virt-who can work no matter rhevm API endpoints with /ovirt-engine/ appended or not

Step	Expected Result
***Only for rhevm mode	Refer to: BZ 1415497
1. register virt-who host to stage candlepin/satellite/sam	
2. configure virt-who run in rhevm mode without /ovirt-engine/ appended. # vi /etc/virt-who.d/rhevm.conf [stage-rhevm] type=rhevm owner=Default_Organization env=Library server=https://bootp-73-3-252.eng.pek2.redhat.com:443 username=admin@internal password=admin rhsm_port=443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin	
3. restart virt-who and check rhsm log	no the 404 error found as following, virt-who can get and send rhevm mapping info to server successfully. [virtwho.rhev-farm ERROR] RhevM-2(11346):MainThread @virt.py:run:375 - Virt backend 'rhev-farm' fails with error: Unable to connect to RHEV-M server: 404 Client Error: Not Found
4. configure virt-who run in rhevm mode with /ovirt-engine/ appended. # vi /etc/virt-who.d/rhevm.conf [stage-rhevm] type=rhevm owner=Default_Organization env=Library server=https://bootp-73-3-252.eng.pek2.redhat.com:443/ovirt-engine/ username=admin@internal password=admin	

rhsm_port=443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin	
5. restart virt-who and check rhsm log	virt-who can get and send rhevm mapping info to server successfully

RHEL7-99718 - 5020 - Subscribe guest with activation key

Step	Expected Result
***For all hypervisor	
1. Create activation key - "virt-who" on Satellite/SAM/Stage Candlepin webui without any sku attach and keep Auto-Attach enabled. Path: - Satellite: WebUI -> Content -> Activation Keys -> New Activation Key - SAM: WebUI -> Subscriptions -> Activation Keys -> New Key - Stage Candlepin -> WebUI -> Activation Keys	activation key should be created successfully. NOTE: for SAM, no Auto-Attach option, which defualt is disabled.
2. Configure virt-who run in any hypervisor, register virt-who host with activation key, such as: # subscription-manager register --org="Default_Organization"--activationkey="virt-who" The system has been registered with ID: 25b92afa- da45-4b7c-b6a3-a069c02ccaa2 Installed Product Current Status: Product Name: Red Hat Enterprise Linux Server Status: Subscribed	-for Satellite/Stage Candlepin: virt-who host will auto attach the best-matched subscription for the installed product from all skus, because the Auto-Attach is enabled. - for SAM: skip the step2 - 10
3. Remove all subscriptions auto attached above for virt-who host. # subscription-manager remove --all	
4. Subscribe host/hypervisr to a physical Datacenter pool (SKU ID: RH00002) by manual.	physical datacenter pool can be attached to host/hypervisor successfully. NOTE: physical VDC dosen't support any product, so can not attach it by auto-attach, we need to attach it by manual to

	derive bonus pool for guest using.
5. Subscribe host/hypervisor to the Limited pool (SKU: RH00204) by manual.	phycal limited pool can attached to host/hypervisor successfully.
6. Register guest with activation key. # subscription-manager register --org="Default_Organization" --activationkey="virt-who" The system has been registered with ID: eb26d950-0d17-43cd-8f78-bf7470c56afb Installed Product Current Status: Product Name: Red Hat Enterprise Linux Server Status: Subscribed # subscription-manager list --co	- for Satellite/Stage Candlepin: guest register normally and auto-attach the best-matched virtual pool (RH00204 or RH00050). ***NOTE: If activation key with no subscriptions specified and auto-attach is enabled, hosts/guests using the activation key search for the best fitting subscription from all provided by the Satellite Server***
7. Add an unmatched virtual pool for guest to activation key.	- for Satellite/Stage Candlepin: add the RH00204 or RH00050, which has not been auto attached to guest in step 6.
8. Re-register guest with activation key. # subscription-manager unregister # subscription-manager register --org="Default_Organization" --activationkey="virt-who" The system has been registered with ID: eb26d950-0d17-43cd-8f78-bf7470c56afb Installed Product Current Status: Product Name: Red Hat Enterprise Linux Server Status: Not Subscribed # subscription-manager list --co	- for Satellite/Stage Candlepin: guest register normally and will not auto-attach subscription. ***NOTE: If activation key with subscriptions specified and auto-attach is enabled, hosts/guests using the activation key select the best fitting subscription from the list specified in the activation key***
9. Add both RH00050 and RH00204 virtual bonus pool to activation key.	
10. Register guest with activation key. # subscription-manager register --org="Default_Organization" --activationkey="virt-who" The system has been registered with ID: eb26d950-0d17-43cd-8f78-bf7470c56afb Installed Product Current Status: Product Name: Red Hat Enterprise Linux Server Status: Subscribed # subscription-manager list --co	- for Satellite/Stage Candlepin: guest register normally and will auto-attach RH00050 or RH00204. ***NOTE: If activation key with subscriptions specified and auto-attach is enabled, hosts/guests using the activation key select the best fitting subscription from the list specified in the activation key***
11. Disable auto-attach for the activation	

key.	
12. Keep the pool RH00204 and RH00050 virtual bonus pool added to the activation key.	
13. Re-register guest again with activation key. # subscription-manager unregister # subscription-manager register --org="Default_Organization" --activationkey="virt-who" The system has been registered with ID: 1302127e-b306-43aa-968a-c3968656bbb2 Installed Product Current Status: Product Name: Red Hat Enterprise Linux Server Status: Subscribed # subscription-manager list --co	guest should have been attached to the two vitual bonus pool RH00204 and RH00050 ***NOTE: If activation key with subscriptions specified and auto-attach is disabled, hosts/guests using the activation key will be auto-attached all subscriptions specified in the activation key.***
14. Remove all the pool subscriptions from the activation key.	
15. Re-register guest again with activation key. # subscription-manager unregister # subscription-manager register The system has been registered with ID: 54ef6410-ff21-4a39-9398-49aaf3a1c503 Installed Product Current Status: Product Name: Red Hat Enterprise Linux Server Status: Not Subscribed Unable to find available subscriptions for all your installed products. # subscription-manager list --co	No consumed subscription pools to list ***NOTE: If activation key with no subscriptions specified and auto-attach is disabled, hosts/guests using the activation key will not be auto-attached subscription, need to attach by manual.***

RHEL7-100484 - 5021 - [Satellite6.3] Filter the "hypervisor list" on Satellite WebUI -> Content Hosts

Step	Expected Result
***Not for Local_Libvirt and VDSM mode.	
1. Register the virt-who host and guest to Satellite6.3 server.	virt-who host and guest can be registered successfully.
2. Check Satellite WebUI -> Conten Hosts	the host and guest show normally.
3. Configure virt-who conf file in /etc/virt-	

who.d/, such as: # vi /etc/virt-wd/esx.conf [test-esx] type=esx owner=Default_Organization env=Library server=10.73.3.234 username=Administrator@vsphere.local password=Welcome1!	
4. Restart virt-who service # systemctl restart virt-who	mapping is ok.
5. Check Satellite WebUI -> Conten Hosts	all the host, guest host and hypervisor are listed well. all hypervisors registered by virt-who show begining with virt-who, like: virt-who-bootp-73-5-249.rhts.eng.pek2.redhat.com-1
6. Filter to only list hypervisor in Satellite WebUI -> Content Hosts. clike the drop-down arrow to the right of the search buttion -> seltect 'list hypervisors' to search.	will just list all hypervisors
7. Select another type to filter in the drop-down menu, such as "ok hosts".	should succeed to list all "ok hosts" ***Bug 1502523 existing.

RHEL7-110637 - 5022 - Multi activation key

Step	Expected Result
***For all hypervisor	
1. Create two activationkeys - "virt-who1" and "virt-who2". PATH: - Satellite: WebUI -> Content -> Activation Keys -> New Activation Key - SAM: WebUI -> Subscriptions -> Activation Keys -> New Key - Stage Candlepin -> WebUI -> Activation Keys -> New	
2. Enable the auto-attach for two activationkeys	for SAM, skip step2 - 7
3. Subscribe host/hypervisor with physical pools, such as Datacenter poor (RH00002), Limited (RH00204), Unlimited pool (RH00060).	
4. Add virtual bonus pool RH00050 and RH00060 to activation key - virt-who1	

5. Add virtual bonus pool RH00204 and RH00060 to activation key - virt-who2	
6. Start virt-who service and register guest with activation key - "virt-who1" # subscription-manager register --org "Default_Organization" --activationkey "virt-who1" The system has been registered with ID: cbb48b49-22c4-4c00-955e-09be7a55932c Installed Product Current Status: Product Name: Red Hat Enterprise Linux Server Status: Subscribed # subscription-manager list --co	guest should register successfully and auto attach the best matched pool (RH00050 or RH00060) in the activation eky - "virt-who1"
7. Re-register guest with activation key - "virt-who2" # subscription-manager unregister # subscription-manager register --org "Default_Organization" --activationkey "virt-who1" Couldn't find activation key 'virt-who1' [root@RHEVM-G1 ~]# subscription-manager register --org "Default_Organization" --activationkey "virt-who2" The system has been registered with ID: 76cdf273-f45a-4ff1-b53a-8768b01aa2e9 # subscription-manager list --co	guest should register successfully and auto attach the best matched pool (RH00204 or RH00050) in the activation key - "virt-who2"
8. Disable the auto-attach for two activationkeys	for SAM, the default is disabled
9. Re-register guest with activation key - "virt-who1" # subscription-manager unregister # subscription-manager register --org "Default_Organization" --activationkey "virt-who1" The system has been registered with ID: cbb48b49-22c4-4c00-955e-09be7a55932c Installed Product Current Status: Product Name: Red Hat Enterprise Linux Server Status: Subscribed # subscription-manager list --co	guest should register successfully and auto attach all the pool (RH00204 and RH00060) in the activation key - "virt-who1"
Re-register guest with activation key - "virt-who2" # subscription-manager unregister	guest should register successfully and auto attach all the pool (RH00204 and RH00050) in the activation key - "virt-

# subscription-manager register --org "Default_Organization" --activationkey "virt-who1" Couldn't find activation key 'virt-who1' [root@RHEVM-G1 ~]# subscription-manager register --org "Default_Organization" --activationkey "virt-who2" The system has been registered with ID: 76cdf273-f45a-4ff1-b53a-8768b01aa2e9 # subscription-manager list --co	who2"

RHEL7-110677 - 5023 - [Satellite WebUI] Check "Registered By" item in content hosts

Step	Expected Result
***for all hypervisors	Refer to
1. Register virt-who host to Satellite # subscription-manager register --username admin --password admin	host register successfully
2. Register guest to Satellite # subscription-manager register --username admin --password admin	guest register successfully
3. Restart virt-who to register hypervisor to Satellite # systemctl restart virt-who	for local_libivirt and vdsm, skip the step
4. Check Satellite WebUI -> Content Hosts -> click into system/hypervisor -> Details -> Content Host Status -> Registered By	- for virt-who host and guest: admin - for Hypervisor: BZ 1502555 existing

RHEL7-110688 - 5024 - Run virt-who in a non-root user account

Step	Expected Result
***for all hypervisors	
1. Prepare virt-who RHEL host with virt-who package installed	
2. Add a new user - "virt-who" to run virt-who # useradd virt-who # passwd virt-who	useradd succsessfully
3. Log into the virt-who host by root to check the default rights about virt-who # ll /etc/ |grep virt-who.d drwx------. 2 root root 4096 Oct 18 14:07 virt-who.d # ll /etc/virt-who.d/ -rw-r--r--. 1 root root 2 Oct 19 18:44 template.conf	

# ll /etc/virt-who.conf -rw-------. 1 root root 2359 Feb 27 04:36 /etc/virt-who.conf ll /etc/sysconfig/ |grep virt-who -rw-------. 1 root root 2357 Oct 18 14:16 virt-who ll /etc/rhsm/ |grep rhsm.conf -rw-r--r--. 1 root root 2022 Oct 18 12:58 rhsm.conf ll /var/log/rhsm/ |grep rhsm.log -rw-r--r--. 1 root root 3458720 Oct 19 18:10 rhsm.log	
4. Add "virt-who" user the same rights as root # chmod 777 /etc/virt-who.d # chmod 777 /etc/virt-who.d/* # chmod 666 /etc/sysconfig/virt-who # chmod 666 /etc/virt-who.conf # chmod 666 /etc/rhsm/rhsm.conf # chmod 666 /var/log/rhsm/rhsm.log	add rights successfully
5. Check the rights again # ll /etc/ |grep virt-who.d drwxrwxrwx. 2 root root 71 Oct 18 22:52 virt-who.d # ll /etc/virt-who.d/ -rw-rw-rw-. 1 root root 1213 May 17 17:08 template.conf # ll /etc/sysconfig/virt-who -rw-rw-rw-. 1 root root 2352 Oct 19 06:10 /etc/sysconfig/virt-who # ll /etc/rhsm/rhsm.conf -rw-rw-rw-. 1 root root 2058 Oct 17 02:59 /etc/rhsm/rhsm.conf # ll /var/log/rhsm/rhsm.log -rw-rw-rw-. 1 root root 543514 Oct 19 06:22 /var/log/rhsm/rhsm.log	the user rights have been changed to the same with root
6. Regsiter virt-who host to SAM/Satellite/Stage Candlepin # subscription-manager register --username admin --password admin	login no problem
7. Log into the virt-who host by "virt-who" user.	register successfully
8. Configure virt-who by /etc/virt-who.d/ to send mapping?such as: [sat-rhevm] type=rhevm owner=Default_Organization env=Library server=https://bootp-73-3-163.eng.pek2.redhat.com:443/ovirt-engine/ username=admin@internal password=redhat rhsm_hostname=bootp-73-3-167.eng.pek2.redhat.com	mapping info is OK

rhsm_port=443 rhsm_prefix=/rhsm rhsm_username=admin rhsm_password=admin	

RHEL-111612 - 5025 - Register virt-who host/guest by Stage Candlepin WebUI

Step	Expected Result
***for all hypervisor	
1. Prepare one virt-who host and one guest, which have not been registered # subscription-manager identity This system is not yet registered. Try 'subscription-manager register --help' for more information.	
2. Check the CPU socket for both host and guest # lscpu	get the CPU socket for the host and guest, such as: Socket(s): 2
3. Create new system profile for virt-who host on Stage Candlepin WebUI -> Systems -> New Sytem Type: according to system Name: system hostname or define by yourself Architecture: according to system, like x86_64 Number of Sockets or LPARs: get from step 1 Red Hat Enterprise Linux Version: according to system	New system profile should be created with "black ?" in front of the "Name"
4. Click into the new created host -> Details -> Identity Cerficate -> Download	download identity certificate successfully, such as: 4421cae2-b67b-4af2-bd39-9cb3817b099f.pem
5. Check the Identity Certificate info # cat 4421cae2-b67b-4af2-bd39-9cb3817b099f.pem	it should be looks like: -----BEGIN CERTIFICATE----- MIIFvDCCPW/PuxvE8xUeONeslNM6jbUmpZ2xaS ..... A6SgAwIBAgIITACsQvAFGyGoCowhIwhmOEP7pK -----END CERTIFICATE----- -----BEGIN RSA PRIVATE KEY----- MIIEowIBAAKCAQABAoIBACb9o2FR ..... E/b0iyzJjwkT64gLNA+eOK2FFQIDAQABAo -----END RSA PRIVATE KEY-----
6. Create cert.pem for host with the CERTIFICATE info got from above step4. # vi /etc/pki/consumer/cert.pem -----BEGIN CERTIFICATE----- MIIFvDCCPW/PuxvE8xUeONeslNM6jbUmpZ2xaS ..... A6SgAwIBAgIITACsQvAFGyGoCowhIwhmOEP7pK -----END CERTIFICATE-----	Create normally
7. Create key.pem for host with the RSA PRIVATE	Create normally

KEY info got from above step4. # vi /etc/pki/consumer/key.pem -----BEGIN RSA PRIVATE KEY----- MIIEowIBAAKCAQABAoIBACb9o2FR ..... E/b0iyzJjwkT64gLNA+eOK2FFQIDAQABAo -----END RSA PRIVATE KEY-----	
8. Edit /etc/rhsm/rhsm.conf to support Stage Candlepin hostname = subscription.rhsm.stage.redhat.com baseurl= https://cdn.stage.redhat.com	
9. Check host register status. # subscription-manager identity system identity: 4421cae2-b67b-4af2-bd39-9cb3817b099f name: dhcp-128-184.nay.redhat.com org name: 11343171 org ID: 11343171 # subscription-manager list --av	the host system has been registered to Stage Candlepin and can list all available subscriptions.
10. Check Stage Candlepin WebUI	the host "Name" has become Green
11. Register guest as step3-8	guest can be register successfully.
12. Configure virt-who run in the hypervisor mode # vi /etc/virt-who.d/ [stage-esx] type=esx owner=11343171 env=11343171 server=10.73.3.166 username=Administrator@vsphere.local password=Welcome1!	
13. Start virt-who to send mapping # systemctl start virt-who	mapping is OK
14. Attach Datacenter SKU (RH00002) for host/hypervisor	
15. Check bonus pool is producted on guest # subscription-manager refresh # subscription-manager list --av	virtual bonus pool (RH00050) should be producted
16. Attach the bonus pool (RH00050) to guest # subscription-manager attach --pool [POOL_ID]	subscribe successfully

RHEL-112413 - 5026 - [Satellite WebUI] check the host link and associations by Content => Red Hat Subscriptions

Step	Expected Result
1. register virt-who host to satellite, make	BZ1506636

sure your satellite has imported the manifest already	
2. create a config file for a hypervisor mode	
3. register hypervisor's guest to satellite as well	
4. start virt-who service to send the h/g info to satellite	
5. Attach physical vdc subscription to hypervisor	
6. Attach virtual vdc subscription to guest	
7. go to "Content" => "Red Hat Subscription" to check vdc consumed status	1). it should show how many physical vdc sku consumed and how many virtual vdc sku consumed, 2). it should show the association info for h/g

RHEL-113053 - 5027 - Together to run command "subscription-manager unregister" and "subscription-manager clean"

Step	Expected Result
***for all hypervisor	Refer to Bug 1506167
1. Register virt-who host to SAM/Satellite/Stage Candlepin	register successfully
2. Run # subscription-manager unregister	unregister no problem
3. Run # subscription-manager clean	clean no problem
4. Check virt-who status and process # systemctl status virt-who # ps -ef | grep virt-who	virt-who service should be runing normally
5. Register the host again. # subscription-manager register	
6. Unregister and clean together by ";" # subscription-manager unregister ; subscription-manager clean	
7. Check virt-who status # systemctl status virt-who	virt-who service should be runing normally ***Bug 1506167, virt-who is killed.
8. Check virt-who process # ps -ef | grep virt-who	virt-who process should exists. ***Bug 1506167, virt-who is killed.