

HP Network Node Manager iSPI Performance for Quality Assurance Software

For the Windows[®] and Linux operating systems

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Intelligent Response Agent (iRA) Command Reference

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Running iRA Commands

Use the **ira** command to run any of the following sub-commands on the iRA system:

- setProbe
- getProbe
- listProbeResults
- deleteProbe
- updateProbe
- enableResponder
- disableResponder
- listResponder
- startProbe
- stopProbe
- version

Syntax

- Example: `ira startProbe -all`

Creating a New QA Probe

Run this command to configure a QA probe for an iRA using the command line interface.

Syntax

- Windows: `ira setProbe [ICMP | UDPECHO | UDP | TCP | DNS | HTTP | HTTPS | ORACLE | DHCP]`
- Linux: `./ira setProbe [ICMP | UDPECHO | UDP | TCP | DNS | HTTP | HTTPS | ORACLE | DHCP]`

Parameters

ICMP

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-op <--operation>**: Specify the type of operation you want the probe to perform. ICMP probes support icmpEcho operation.
- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS

Optional Parameters

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-ds <--dataSize>**: Specify the size of the data packets that the QA probe sends or receives.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.

UDP

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-op <--operation>**: Specify the type of operation you want the probe to perform. TCP probes support udpJitter operation.
- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS

Optional Parameters

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-np <--numPackets>**: Specify the number of packets to be transmitted
- **-ds <--dataSize>**: Specify the size of the data packets that the QA probe sends or receives.
- **-pi <--interPktInterval>**: Specify the time interval between the two consecutive transmitted packets.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-sp <--sourcePort>**: Specify the port number for the QA probe's source node.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.

UDPECHO

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-op <--operation>**: Specify the type of operation you want the probe to perform. TCP probes support udpEcho operation.
- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS

Optional Parameters

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-np <--numPackets>**: Specify the number of packets to be transmitted
- **-ds <--dataSize>**: Specify the size of the data packets that the QA probe sends or receives.
- **-pi <--interPktInterval>**: Specify the time interval between the two consecutive transmitted packets.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-sp <--sourcePort>**: Specify the port number for the QA probe's source node.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA

probe. Specify one of the following values:

- IPv4
- DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.

TCP

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-op <--operation>**: Specify the type of operation you want the probe to perform. TCP probes support tcpConnect operation.
- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS

Optional Parameters

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-sp <--sourcePort>**: Specify the port number for the QA probe's source node.

- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.

DNS

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-op <--operation>**: Specify the type of operation you want the probe to perform. DNS probes support dnsForward operation.
- **-rn <--resolveHostName>**: Specify the host name that the QA probe needs to resolve to an IP address. The host name resolution must complete before the source host sends the initial IP packet.
- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS

Optional Parameters

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.

- **-sp <--sourcePort>**: Specify the port number for the QA probe's source node.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.

HTTP

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-op <--operation>**: Specify the type of operation you want the probe to perform.

HTTP probes support httpGet operation.

- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS
- **-cd <--contentDownload>**: Specify whether to download the content of the destination web page

Optional Parameters

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fe <--failOnCtlErr>**: Specify if the QA probe fails for incorrect Certificate Trust List (CTL)

Set the value to TRUE or FALSE.

If this value is set to TRUE, specify the following parameter:

- **-pu <--proxyUsed>**: Specify whether the QA probe uses an HTTP proxy server. Set the value to TRUE or FALSE.

If you set this value to TRUE, specify the following parameters:

- **-pa <--proxyAddr>**: Specify the HTTP proxy server address.
- **-pn <--proxyUsername>**: Specify the HTTP proxy user name for the QA probe owner.
- **-pp <--proxyPort>**: Specify the HTTP proxy port number on which the QA probe would run.
- **-pt <--proxyAddrType>**: Specify any of the following the HTTP proxy address type:
 - IPv4
 - DNS
- **-pw <--proxyPassword>**: Specify the HTTP proxy password for the QA probe owner.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.
- **-ui <--uri>**: Specify the Uniform Resource Locator specified for the QA probe
- **-un <--username>**: Specify the user name to connect to the HTTP web page
- **-ps <--password>**: Specify the password to connect to the HTTP web page

HTTPS

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-op <--operation>**: Specify the type of operation you want the probe to perform.

HTTPS probes support httpsGet operation.

- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS
- **-cd <--contentDownload>**: Specify whether to download the content of the destination web page

Optional Parameters

- **-et <--ensureTrusted>**: Specify whether or not to validate the certificate of the host (configured in the target address) against the iRA trust store.

If the value is set to TRUE, the certificate of the host is validated against the list in the iRA Truststore.

If the value is set to FALSE, the validation of the certificate of the host is ignored.

- **-ca <--trustCAImplicit>**: Specify whether the certificate of the host configured in the target address is trusted implicitly. Set the value to TRUE or FALSE.

If the value is set to TRUE, the certificate of the target host is downloaded to the iRA Truststore and validated.

If the value is set to FALSE, the certificate of the host is validated against the list in the iRA Truststore. If the certificate is not listed in the iRA Truststore, the certificate validation fails which results in the probe failure.

Note: If a target host does not have a valid trusted certificate and you want to successfully complete the certificate validation, you can perform one of the following:

- Set the value of the parameter to TRUE. This automatically downloads the certificate of the host to the iRA Truststore (`$IRA_HOME/ira/conf/jssecacerts`)
- Use `$IRA_HOME/lib/nonOV/jre/bin/keytool import` option to manually import the certificate of the host to the iRA Truststore.

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fe <--failOnCtlErr>**: Specify if the QA probe fails for incorrect Certificate Trust List (CTL)

Set the value to TRUE or FALSE.

If this value is set to TRUE, specify the following parameter:

- **-pu <--proxyUsed>**: Specify whether the QA probe uses an HTTPS proxy server. Set the value to TRUE or FALSE.

If you set this value to TRUE, specify the following parameters:

- **-pa <--proxyAddr>**: Specify the HTTPS proxy server address.
- **-pn <--proxyUsername>**: Specify the HTTPS proxy user name for the QA probe owner.
- **-pp <--proxyPort>**: Specify the HTTPS proxy port number on which the QA probe would run.
- **-pt <--proxyAddrType>**: Specify any of the following the HTTPS proxy address type:
 - IPv4
 - DNS
- **-pw <--proxyPassword>**: Specify the HTTPS proxy password for the QA probe owner.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:

- IPv4
- DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.
- **-ui <--uri>**: Specify the Uniform Resource Locator specified for the QA probe
- **-un <--username>**: Specify the user name to connect to the HTTPS web page
- **-ps <--password>**: Specify the password to connect to the HTTPS web page

ORACLE

Mandatory Parameters

- **-db <--databaseName>**: Specify the name of the database running on the target Oracle server.
- **-on <--ownerName>**: The owner of the QA probe.
- **-op <--operation>**: Specify the type of operation you want the probe to perform. Specify any of the following values:
 - dbConnect
 - dbQuery
- **-pw <--password>**: Specify the Oracle database password.
- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS
- **-un <--username>**: Specify the Oracle database user name.

Optional Parameters

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
 - **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
 - **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
 - **-qs <--queryStr>**: Specify the SQL Query that the QA probe would run. In Linux, use the following command format while using "*" (Asterisk), in the query string: 'select "*" from <Table Name>'
 - **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
 - **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS
- You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.
- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.

DHCP

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-op <--operation>**: Specify the type of operation you want the probe to perform. DHCP probes support dhcpIpGet operation.
- **-ta <--targetAddr>**: Specify the IP address of the destination DHCP server.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tt <--targetAddrType>**: Specify the type of the destination server IP address configured for the QA probe. DHCP probes support IPv4 address.

Optional Parameters

- **-op82 <--option82>**: Specify the custom parameters such as Circuit ID, Remote ID.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-sp <--sourcePort>**: Specify the source port number of the node on which the QA probe runs.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. DHCP probes support only IPv4 address.

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, and DHCP probe types.

- **-to <--timeOut>**: Number of milliseconds after which the QA probe drops the connection between the source IP address and the destination server IP address. You can specify a value between 1 and 60 for this parameter.

Updating QA Probes

Run this command to modify an existing QA probe on the iRA.

Syntax

- Windows: `ira updateProbe -ownerName <Owner of the Probe> -testName <Name of the QA probe>`*[Optional Parameter to Update]*
- Linux: `./ira updateProbe -ownerName <Owner of the Probe> -testName <Name of the QA probe>`*[Optional Parameter to Update]*

Make sure that you specify at least one optional parameter.

Parameters

ICMP

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Optional Parameters

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-ds <--dataSize>**: Specify the size of the data packets that the QA probe sends or receives.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS

TCP

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Optional Parameters

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of

seconds after which the QA probe repeats the test. You can specify a value between 1-604800.

- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-sp <--sourcePort>**: Specify the port number for the QA probe's source node.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS

UDP

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Optional Parameters

- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.

- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
 - DNS
- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
 - **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
 - **-np <--numPackets>**: Specify the number of packets to be transmitted
 - **-ds <--dataSize>**: Specify the size of the data packets that the QA probe sends or receives.
 - **-pi <--interPktInterval>**: Specify the time interval between the two consecutive transmitted packets.
 - **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
 - **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
 - **-sp <--sourcePort>**: Specify the port number for the QA probe's source node.
 - **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.

UDPEcho

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Optional Parameters

- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tn <--testName>**: Specify the name of the QA probe.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
 - DNS
- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
 - **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
 - **-np <--numPackets>**: Specify the number of packets to be transmitted
 - **-ds <--dataSize>**: Specify the size of the data packets that the QA probe sends or receives.
 - **-pi <--interPktInterval>**: Specify the time interval between the two consecutive transmitted packets.
 - **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
 - **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
 - **-sp <--sourcePort>**: Specify the port number for the QA probe's source node.
 - **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.

DNS

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Optional Parameters

- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-rn <--resolveHostName>**: Specify the host name that the QA probe needs to resolve to an IP address. The host name resolution must complete before the source host sends the initial IP packet.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-sp <--sourcePort>**: Specify the port number for the QA probe's source node.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS

HTTP

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Optional Parameters

- **-cd <--contentDownload>**: Specify whether to download the content of the destination web page
- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-fe <--failOnCtlErr>**: Specify if the QA probe fails for incorrect Certificate Trust List (CTL)

Set the value to TRUE or FALSE.

If this value is set to TRUE, specify the following parameter:

- **-pu <--proxyUsed>**: Specify whether the QA probe uses an HTTP proxy server. Set the value to TRUE or FALSE.

If you set this value to TRUE, specify the following parameters:

- **-pa <--proxyAddr>**: Specify the HTTP proxy server address.
- **-pn <--proxyUsername>**: Specify the HTTP proxy user name for the QA probe owner.
- **-pp <--proxyPort>**: Specify the HTTP proxy port number on which the QA probe would run.

- **-pt <--proxyAddrType>**: Specify any of the following the HTTP proxy address type:
 - IPv4
 - DNS
- **-pw <--proxyPassword>**: Specify the HTTP proxy password for the QA probe owner.
- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS
- **-ui <--uri>**: Specify the Uniform Resource Locator specified for the QA probe
- **-un <--username>**: Specify the user name of the target HTTP web page
- **-ps <--password>**: Specify the password of the target HTTP web page

HTTPS

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Optional Parameters

- **-cd <--contentDownload>**: Specify whether to download the content of the destination web page
- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.

- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:

- IPv4
- DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-et <--ensureTrusted>**: Specify whether or not to validate the certificate of the host (configured in the target address) against the iRA trust store.

If the value is set to TRUE, the certificate of the host is validated against the list in the iRA Truststore.

If the value is set to FALSE, the validation of the certificate of the host is ignored.

- **-ca <--trustCAImplicit>**: Specify whether the certificate of the host configured in the target address is trusted implicitly. Set the value to TRUE or FALSE.

If the value is set to TRUE, the certificate of the target host is downloaded to the iRA Truststore and validated.

If the value is set to FALSE, the certificate of the host is validated against the list in the iRA Truststore. If the certificate is not listed in the iRA Truststore, the certificate validation fails which results in the probe failure.

Note: If a target host does not have a valid trusted certificate and you want to successfully complete the certificate validation, you can perform one of the following:

- Set the value of the parameter to TRUE. This automatically downloads the certificate of the host to the iRA Truststore (`$IRA_HOME/ira/conf/jssecacerts`)
- Use `$IRA_HOME/lib/nonOV/jre/bin/keytool import` option to manually import the certificate of the host to the iRA Truststore.

- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
- DNS
- **-fe <--failOnCtlErr>**: Specify if the QA probe fails for incorrect Certificate Trust List (CTL)

Set the value to TRUE or FALSE.

If this value is set to TRUE, specify the following parameter:

- **-pu <--proxyUsed>**: Specify whether the QA probe uses an HTTP proxy server. Set the value to TRUE or FALSE.

If you set this value to TRUE, specify the following parameters:

- **-pa <--proxyAddr>**: Specify the HTTP proxy server address.
- **-pn <--proxyUsername>**: Specify the HTTP proxy user name for the QA probe owner.
- **-pp <--proxyPort>**: Specify the HTTP proxy port number on which the QA probe would run.
- **-pt <--proxyAddrType>**: Specify any of the following the HTTP proxy address type:
 - IPv4
 - DNS
- **-pw <--proxyPassword>**: Specify the HTTP proxy password for the QA probe owner.
- **-ui <--uri>**: Specify the Uniform Resource Locator specified for the QA probe
- **-un <--username>**: Specify the user name of the target HTTPS web page
- **-ps <--password>**: Specify the password of the target HTTPS web page

ORACLE

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Optional Parameters

- **-db <--databaseName>**: Specify the name of the database running on the target Oracle server.
- **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.

- **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
- **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
- **-pw <--password>**: Specify the Oracle database password.
- **-qs <--queryStr>**: Specify the SQL Query that the QA probe would run. In Linux, use the following command format while using "*" (Asterisk), in the query string: 'select "*" from <Table Name>'
- **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
- **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. Specify one of the following values:
 - IPv4
 - DNS

You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, DNS, DHCP, HTTP, and HTTPS probe types.

- **-ta <--targetAddr>**: Specify the destination IP address for which the QA probe is configured.
- **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
- **-to <--timeOut>**: The number of milliseconds after which the QA probe drops the connection between the source IP address and the destination IP address. You can specify a value between 1 and 60 for this parameter.
- **-tt <--targetAddrType>**: Specify the type of the destination IP address configured for the QA probe.

Specify any of the following values:

- IPv4
 - DNS
- **-un <--username>**: Specify the Oracle database user name.

DHCP

Mandatory Parameters

- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Optional Parameters

- **-op <--operation>**: Specify the type of operation you want the probe to perform. DHCP probes support dhcpIpGet operation.
 - **-tp <--targetPort>**: Specify the target port number for the node on which the QA probe runs.
 - **-ta <--targetAddr>**: Specify the IP address of the destination DHCP server.
 - **-tt <--targetAddrType>**: Specify the type of the destination server IP address configured for the QA probe. DHCP probes support IPv4 address.
 - **-op82 <--option82>**: Specify the custom parameters such as Circuit ID, Remote ID.
 - **-dc <--description>**: Specify the description of the QA probe. Specify any detail in this parameter that you may need to identify the QA probe later.
 - **-fr <--frequency>**: Specify the frequency of the QA probe. The value indicates the number of seconds after which the QA probe repeats the test. You can specify a value between 1-604800.
 - **-pc <--probeCount>**: Specify the number of probes designed for the test scenario. Specify a value between 1 and 15.
 - **-sa <--sourceAddr>**: Specify the source IP address for which the QA probe is configured.
 - **-sp <--sourcePort>**: Specify the source port number of the node on which the QA probe runs.
 - **-st <--sourceAddrType>**: Specify the type of the source IP address configured for the QA probe. DHCP probes support only IPv4 address.
- You can configure this parameter for all probe types. iRA uses this parameter for ICMP, TCP, UDP, and DNS probe types.
- **-to <--timeOut>**: Number of milliseconds after which the QA probe drops the connection between the source IP address and the destination server IP address. You can specify a value between 1 and 60 for this parameter.

Starting QA Probes

Run this command to start running a QA probe on the iRA using the command line interface.

Syntax

- Windows: `ira startProbe [-all] -owner <Owner of the Probe> -testName <Name of the QA probe>`
- Linux: `./ira startProbe [-all] -owner <Owner of the Probe> -testName <Name of the QA probe>`

Parameters

- **-all**: Runs all the QA probes configured on the iRA.
You can specify the iRA name in the owner parameter.
- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Stopping QA Probes

Run this command to stop running a QA probe on the iRA using the command line interface.

Syntax

- Windows: `ira stopProbe [-all] -owner <Owner of the Probe> -testName <Name of the QA probe>`
- Linux: `./ira stopProbe [-all] -owner <Owner of the Probe> -testName <Name of the QA probe>`

Parameters

- **all**: Stops all the QA probes configured on the iRA.
You can specify the iRA name in the owner parameter.
- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Displaying QA Probe Configurations

Run this command to display the QA probe configurations.

Syntax

- Windows: `ira getProbe [-all] -ownerIndex <QA Probe Owner> -testName <Name of the QA probe>`
- Linux: `./ira getProbe [-all] -owner <QA Probe Owner> -testName <Name of the QA probe>`

Parameters

- **-all**: Displays information about all the QA probes configured on the iRA.

You can specify the iRA name in the owner parameter.

- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Displaying QA Probe Results

Run this command to display the following information about a QA probe:

Status of the QA probe the last time it ran. Displays whether the QA probe was successful in the last run

Syntax

- Windows: `ira listProbeResults [-all] -owner <Owner of the Probe> -testName <Name of the QA probe>`
- Linux: `./ira listProbeResults [-all] -owner <Owner of the Probe> -testName <Name of the QA probe>`

Parameters

- **-all**: Runs all the QA probes configured on the iRA.
- You can specify the iRA name in the owner parameter.
- **-on <--ownerName>**: The owner of the QA probe.
 - **-tn <--testName>**: Specify the name of the QA probe.

Deleting a QA Probe

Run this command to delete a QA probe from the iRA using the command line interface.

Syntax

- Windows: `ira deleteProbe [-all] -owner <QA Probe Owner> -testName <Name of the QA probe>`
- Linux: `./ira deleteProbe [-all] -owner <QA Probe Owner> -testName <Name of the QA probe>`

Parameters

- **all**: Deletes all the QA probes configured on the iRA specified in the owner parameter.
- **-on <--ownerName>**: The owner of the QA probe.
- **-tn <--testName>**: Specify the name of the QA probe.

Measuring UDPJitter and Packet Loss Percentage

The Intelligent Response Agent (iRA) module of NNM iSPI Performance for QA enables you to monitor and collect the following UDP performance metrics for two iRA nodes:

- Round Trip Time
- UDP Jitter from the source node to destination node
- UDP Jitter from the destination node to source node
- Two way UDP jitter
- UDP packet loss percentage from the source node to destination node
- UDP packet loss percentage from the destination node to source node
- Two way UDP packet loss percentage

To use the iRA as a UDP responder, see ["Configuring UDP Responder" below](#).

iRA stores the metrics in QA-PROBE-MIB. After seeding and discovering the iRA systems in NNM iSPI Performance for QA, you can view these metrics in NNM iSPI Performance for QA Inventory Views and reports.

Configuring UDP Responder

Run this command to configure and enable a UDP responder on specific interfaces and ports.

Syntax

- Windows: `ira enableResponder [-in <Interface IP Address>] -sp <Port number or Port number range>`
- Linux: `./ira enableResponder [-in <Interface IP Address>] -sp <Port number or Port number range>`

Parameters

- **in:** Specify the interface name on which the iRA should accept the UDP packets.

If you do not specify this parameter, the iRA destination node accepts UDP packets on all interfaces.

- **sp:** Specify the port number on which the iRA should accept the UDP packets.

You can also specify a range of ports separated by "-" (Hyphen). This parameter enables the responders on all these ports in range.

Disabling a UDP Responder

Run this command to disable a UDP responder on specific interfaces and ports.

Syntax

- Windows: `ira disableResponder [-in <Interface IP Address>] -sp <Port number or Port number range>`
- Linux: `./ira disableResponder [-in <Interface IP Address>] -sp <Port number or Port number range>`

Parameters

- **in:** Specify the interface name for which you want to disable the UDP responder. If UDP responder is already running on this interface, this command stops accepting UDP packets on this interface.

If you do not specify this parameter, iRA stops accepting UDP packets on all interfaces for the specified ports.

- **sp:** Specify the port number for which you want to disable the UDP responder.

You can also specify a range of ports separated by "-" (Hyphen). This parameter disables the responders on all these ports in range.

Listing UDP Responders

Run this command to list all the enabled UDP responders.

Syntax

- Windows: `ira listResponder`
- Linux: `./ira listResponder`

