NAC Request Tool

The NAC Request Tool allows you to perform the following functions using a CLI-based request:

- Add or remove a MAC address to or from an end-system group or "Deny List."

- Add or remove users to and from user groups.

- Add or remove an end-system from a group and reauthenticate the end-system.

- Add, delete, or update registered users or devices.

- Delete an end-system in Extreme Management Center.

- Add, delete, or update devices in Extreme Management Center.

- Perform a forced reauthentication or a forced reauthentication and scan of end-systems.

- Add or remove a MAC lock on an end-system.

- Update end-system custom fields.

- Export the entire end-system table in the Extreme Management Center database to a .csv file.

- Print or export the members of an end-system or user group.

- Display end-system, Extreme Management Center device, or registration information.

- Import and export devices in Extreme Management Center using an .ngf file.

- Add or update Extreme Management Center profiles and credentials.

- Add or update CLI credentials.

- Update the local NAC Request Tool Truststore with the Extreme Management Center server certificate.

The tool can perform an operation on a single end-system or user using the single command line, or it can perform an operation on multiple end-systems and users through the use of a CSV (Comma Separated Value) file.

NOTE: If you are running NetSight version 5.0 or higher, you must use a NAC Request Tool version of 5.0 or higher.

Deploying the NAC Request Tool

To deploy the NAC Request Tool, unzip the contents of the NacRequestTool.zip file to a directory of your choice.

On a Windows system, open a Command Prompt window and "cd" to the directory where you installed the tool.

On a Linux system, open a shell and "cd" to the directory where you installed the tool.

NOTE: You must be a member of an Extreme Management Center authorization group that has the Extreme Management Center NAC Manager > "Read/Write access to the NAC Web Services APIs" capability selected in order to use the NAC Request Tool.

Performing a Request

The NAC Request Tool uses the following command line argument to perform a request.

```
NacRequest -server <X1> -username <X2> -password <X3> [
options ]
```

where:

        X1 is the IP address of the Extreme Management Center Server
        X2 is the user's Extreme Management Center username
        X3 is the user's Extreme Management Center password

Using a CFG File

You can create a .cfg file in the working directory to contain your username and password credentials as an alternative to using the command line arguments. You can also include the optional httpsport parameter in the .cfg file, if desired. When both the .cfg file and command line arguments are specified, the command line arguments take precedence.

In the .cfg file, each parameter should be specified on a separate line using either of the following formats. Escape characters may be necessary in the .cfg file if "\" is used.

```
username <X2>
password <X3>
httpsport <X4>
```

or

```
username=<X2>
password=<X3>
httpsport=<X4>
```

where:

> X2 is the user's Extreme Management Center username
> X3 is the user's Extreme Management Center password
> X4 is the Extreme Management Center server HTTPS port (default 8443)

Command Line Options

The following table describes the possible command line options that you can use when sending a NAC Request Tool command. Keep in mind the following considerations when sending a request:

- The **-server**, **-username**, and **-password** options are required.

- If you specify an option in the command line, you must also specify a value.

- If an option is not specified in the command line, then the default value (if there is one) is used. The values listed below in bold typeface are the defaults for the given option.

- If the -csv option is used, all other options (except the required options) are ignored.

Command Line Options

Option	Description	Values	Required?
-server	IP address of the Extreme Management Center Server.	For example, 10.20.30.40	Yes
-username	The user's Extreme Management Center username.	<domain name\username> Windows platform server <username> Linux platform server	Yes
-password	The user's Extreme Management Center password.	<mypassword>	Yes

Command Line Options

Option	Description	Values	Required?
-httpsport	The Extreme Management Center server HTTPS port.	<HTTPS port number> (default is 8443)	No
-timeout	The amount of time before the request is terminated.	The amount of time specified in milliseconds.	No
-oper	The type of operation for this request.	Possible values are: **info** acceptcert clicredential endsystemcsv esdelete esoverride maclock nscredential nsdevice nsprofile reauth reauthandscan regdevice reguser saveinfo useroverride	No
-user	The user identifier. This option is only for use with the useroverride operation.	<user name>	No
-type	The end-system identifier type. This option is only for use with esoverride operations. If it is not specified, the end-system type defaults to full MAC address.	Possible values are: **FULL_MAC** FULL_IP HOSTNAME	No
-endsystem	The MAC address, IP address, or Hostname of the end-system. For MAC address, this option is for use with esoverride, reauth, info, maclock and saveinfo operations. For IP address and Hostname, this option is only for use with esoverride operations.	<MAC address>, <IP address>, or <Hostname>	No
-deviceip	The IP address of an Extreme Management Center device. This option is for use with the info operation.	<IP address>	No
-reginfo	This option is for use with the info operation to provide an extended set of information on the registered device and registered user associated with the MAC address.	<MAC address>	No
-hr	This option is for use with the info operation to print the most recent health result and vulnerabilities for an end-system. The output is printed in xml, and is meant to be used by a tool that can parse the xml format and extract the details.	None	No
-descr	A description of the override. Valid for esoverride and useroverride operations.	"<description>"	No
-group	The target end-system or user group. This option is valid for info, esoverride, and useroverride operations.	"<end-system group>" or "<user group>". Use "Deny List" to add end-system to Deny List group.	No

Command Line Options

Option	Description	Values	Required?
-add	Add an end-system or user to a group, create a registered user or registered device, add an end-system MAC lock, add a device to Extreme Management Center, add a profile or a credential to Extreme Management Center. This option is valid for esoverride, useroverride, reguser, regdevice, maclock, nsdevice, nsprofile, nscredential, and clicredential operations. For esoverride and useroverride operations, the end-system or user is removed from other groups of which they are already a member.	None	No
-addAndReauth	Add an end-system to a group and then reauthenticate the end-system. This option is valid for the esoverride operation.	None	No
-add -noremove	Add an end-system or user to a group. The end-system or user will not be removed from other groups of which they are already a member. This option is valid for esoverride and useroverride operations.	None	No
-del	Delete an end-system or user from a group, delete a registered user or registered device, delete an end-system MAC lock, or delete a device from Extreme Management Center. This option is valid for esoverride, useroverride, reguser, regdevice, maclock, and nsdevice operations.	None	No
-delAndReauth	Delete an end-system from a group and then reauthenticate the end-system. This option is valid for the esoverride operation.	None	No
-update	Update the properties of a device in Extreme Management Center. Update a profile or a credential in Extreme Management Center. This option is valid for nsdevice, reguser, regdevice, nsprofile, nscredential, and clicredential operations.	None	No
-import	Import a list of Extreme Management Center devices using a text file that was created in Extreme Management Center Generated Format (.ngf file). This option is valid for nsdevice operations.	Path to the file to import. For example, C:\Users\User\import.ngf	No
-export	Export a device list from Extreme Management Center to a text file created in Extreme Management Center Generated Format (.ngf file). This option is valid for nsdevice operations.	Path to where the file should be saved. For example, C:\Users\User\export.ngf	No
-csv	Path and name of a CSV file. This is used to create multiple overrides. This option is valid for reauth, reauthandscan, esoverride, useroverride, reguser, and regdevice, operations.	For example, "c:\myNACRequests.txt"	No

Command Line Options

Option	Description	Values	Required?
-properties	A comma-separated list of properties. This option is valid for reguser, regdevice, nsdevice, nsprofile, nscredential, and clicredential operations.	Properties for adding and deleting registered users: applianceGroup*, userName*, userTypeStr*, firstName, middleName, lastName, emailAddress, sponsor, startTime, expiresTime, userData1, userData2, userData3, userData4, userData5. Properties for updating registered users: applianceGroup, userName*, userTypeStr, firstName, middleName, lastName, emailAddress, sponsor, startTime, expiresTime, userData1, userData2, userData3, userData4, userData5. Properties for adding registered devices: applianceGroup*, userName*, macAddress*, stateStr*, ipAddress, sponsor, sponsorDeviceGroup, description. Properties for deleting registered devices: applianceGroup*, userName*, macAddress*, stateStr, ipAddress, sponsor, sponsorDeviceGroup, description. Properties for updating registered devices: applianceGroup, userName, macAddress*, stateStr, ipAddress, sponsor, sponsorDeviceGroup, description. Properties for adding an Extreme Management Center device: ip*,	No

Command Line Options

Option	Description	Values	Required?
		profileName*, snmpContext, nickName.	
		Properties for deleting an Extreme Management Center device: ip*.	
		Properties for updating an Extreme Management Center device: ip*, profileName, snmpContext, nickName, userData1, userData2, userData3, userData4.	
		Properties for updating an Extreme Management Center device: ip*, profileName, snmpContext, nickName, userData1, userData2, userData3, userData4.	
		Properties for adding an Extreme Management Center Profile: name*, snmpVersion*, read*, write*, maxAccess*, authCred*.	
		Properties for updating an Extreme Management Center Profile: name*, read*, write*, maxAccess*, authCred*.	
		Properties for adding an Extreme Management Center Credential: name*, snmpVersion*, communityName**, userName**, authPassword, authType, privPassword, privType.	
		Properties for updating an Extreme Management Center Credential: name*, communityName, userName, authPassword, authType, privPassword, privType.	
		Properties for adding a CLI Credential: userName*, description*,	

Command Line Options

Option	Description	Values	Required?
		loginPassword*, enablePassword*, configurationPassword*, type*.	
		Properties for updating a CLI Credential: userName*, description*, loginPassword, enablePassword, configurationPassword, type.	
		*Indicates a mandatory property. ** For SNMP v1 or v2, communityName is required. For SNMP v3, userName is required.	
-help	Displays the available options.	None	No
-ex	Provides an extended set of information for an end-system. This option is valid for info operations.	None	No
-switch	IP address of the switch to which the end-system will be locked. This option is valid for maclock operations.	For example, 10.20.30.40	No
-port	Switch port to which the end-system will be locked. This option is valid for maclock operations.	For example, ge.1.1	No
-reject	Reject the authentication request if the end-system tries to authenticate on a different switch/port. This option is valid for maclock operations.	None	No
-policy	The policy that should be applied if the end-system tries to authenticate on a different switch/port. This option is valid for maclock operations.	For example, "Deny Access"	No
-custom1 -custom2 -custom3 -custom4	Four custom fields used to display end-system information. These options are valid for the saveinfo operation.	For example, "asset tag 1234"	No
-version	Displays the NAC Request Tool version.	None	No

NAC Request Tool Operations

This section provides descriptions of the different operations available with the NAC Request Tool, and includes examples of command line usage and options for each operation.

NOTE: Following a NAC Request "override" operation, you must enforce the changes to your ExtremeControl engines unless you have selected "Automatically update ExtremeControl engines" as a end-system or user group option.

Add an End-System to an End-System Group

This request adds an end-system to the specified end-system group and removes the end-system from all other end-system groups except the "Deny List" group. The specified end-system group must exist in NAC Manager. Full MAC addresses, full IP addresses, and hostnames are allowed as end-system identifiers for this operation, with the default being full MAC.

The **-add**, **-oper**, **-endsystem**, and **-group** options are all required. The **-oper** option requires the **esoverride** value. The **-type** option is optional and defaults to full MAC address (FULL_MAC) if not supplied. The **-descr** option is optional and defaults to an empty string if not supplied. If you want to add an end-system to an end-system group, but you do not want to remove the end-system from other groups of which it is already a member, use the **-add -noremove** option.

For example, the following command will add the end-system with a MAC address of 11:22:33:44:55:66 to the "Printer List" end-system group and remove the end-system from all other end-system groups except the "Deny List" group.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper esoverride -endsystem 11:22:33:44:55:66 -descr
"South side printer" -group "Printer List"
```

This example shows the command using the **-type** option to specify an IP address.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper esoverride -type FULL_IP -endsystem 11.22.33.44 -
descr "South side printer" -group "Printer List"
```

Remove an End-System from an End-System Group

This request removes an end-system from the specified end-system group. Full MAC addresses, full IP addresses, and hostnames are allowed as end-system identifiers for this operation, with the default being full MAC.

The options **-del**, **-oper**, **-endsystem**, and **-group** are all required. The **-oper** option requires the **esoverride** value. The **-type** option is optional and defaults to full MAC address (FULL_MAC) if not supplied.

For example, the following command will delete the end-system with a MAC address of 11:22:33:44:55:66 from the "Printer List" end-system group but not the "Deny List" end-system group.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-del -oper esoverride -endsystem 11:22:33:44:55:66 -group
"Printer List"
```

Add an End-System to an End-System Group and Reauthenticate

This request adds an end-system to an end-system group and then reauthenticates the end-system.

The **-addAndReauth**, **-oper**, **-endsystem**, and **-group** options are all required. The **-oper** option requires the **esoverride** value.

For example, the following command will add the end-system with a MAC address of 11:22:33:44:55:66 to the "Printer List" end-system group and then reauthenticate the end-system.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-addAndReauth -oper esoverride -endsystem 11:22:33:44:55:66
-group "Printer List"
```

Remove an End-System from an End-System Group and Reauthenticate

This request deletes an end-system from an end-system group and then reauthenticates the end-system.

The **-delAndReauth**, **-oper**, **-endsystem**, and **-group** options are all required. The **-oper** option requires the **esoverride** value.

For example, the following command will remove the end-system with a MAC address of 11:22:33:44:55:66 from the "Printer List" end-system group and then reauthenticate the end-system.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-delAndReauth -oper esoverride -endsystem 11:22:33:44:55:66
-group "Printer List"
```

Blacklist an End-System

This request adds the end-system to the "Deny List" end-system group. If the end-system is a member of another end-system group, it will remain a member

of that group. Full MAC addresses, full IP addresses, and hostnames are allowed as end-system identifiers for this operation, with the default being full MAC.

The **-add**, **-oper**, **-endsystem**, and **-group** options are all required. The **-oper** option requires the **esoverride** value. The **-descr** option is optional and defaults to an empty string if not supplied.

For example, the following command will add the end-system with a MAC address of 11:22:33:44:55:66 to the "Deny List" end-system group. If the end-system is a member of another end-system group, it will remain a member of that group.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper esoverride -endsystem 11:22:33:44:55:66 -descr
"unauthorized access" -group "Deny List"
```

Undo a Blacklist

This request removes the end-system from the "Deny List" end-system group. If the end-system is a member of another end-system group, it will remain a member of that group. Full MAC addresses, full IP addresses, and hostnames are allowed as end-system identifiers for this operation, with the default being full MAC.

The **-del**, **-oper**, **-endsystem**, and **-group** options are all required. The **-oper** option requires the **esoverride** value.

For example, the following command will delete the end-system with a MAC address of 11:22:33:44:55:66 from the "Deny List" end-system group. If the end-system is a member of another end-system group, it will remain a member of that group.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-del -oper esoverride -endsystem 11:22:33:44:55:66 -group
"Deny List"
```

Add a User to a User Group

This request adds a user to the specified user group. The specified group must exist in NAC Manager.

The **-add**, **-oper**, **-user**, and **-group** options are all required. The **-oper** option requires the **useroverride** value. The
-descr option is optional and defaults to an empty string if not supplied.

For example, the following command adds the end user with the user name of rjones to the "Registered Users" user group and remove the end user from all other user groups of which it is already a member.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper useroverride -user rjones -descr "Enterprise User"
-group "Registered Users"
```

If you want to add a user to a user group and then reauthenticate the end-system, use the **-addAndReauth** option.

If you want to add a user to a user group, but you do not want to remove the user from other groups of which it is already a member, use the **-add -noremove** option.

Remove a User from a User Group

This request removes a user from the specified user group.

The **-del**, **-oper**, **-user**, and **-group** options are all required. The **-oper** option requires the **useroverride** value.

For example, the following command will delete the end user with the user name of rjones from the "Registered Users" user group.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-del -oper useroverride -user rjones -group "Registered Users"
```

Add, Delete, or Update a Registered User

This request adds or deletes a registered user to the Registration System Administration web page or updates an existing registered user.

Add and Update Operations

The **-add**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **reguser** value. (See below for a list of **-properties** values.)

For example, the following command will add a registered end user with the user name jsmith.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper reguser -properties
"applianceGroup=default,userName=jsmith,firstName=John,
lastName=Smith,userTypeStr=Guest"
```

Delete Operations

The **-del**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **reguser** value.

For example, the following command will delete a registered end user with the user name jsmith.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-del -oper reguser -properties
"applianceGroup=default,userName=jsmith,userTypeStr=Guest"
```

Properties Values

The **-properties** option is a comma-separated list that can include the following values for add, delete, and update operations:

- applianceGroup - (required except for Update operations) the engine group that the registered user belongs to.
- userName - (required) the login identifier of the registered user.
- userTypeStr - (required except for Update operations) the registered user's type. Valid values are "Guest" and "Web Authentication."
- firstName - the registered user's first name.
- middleName - the registered user's middle name or middle initial.
- lastName - the registered user's last name.
- emailAddress - the registered user's email address.
- sponsor - the user who is sponsoring the registration of this user.
- startTime - the date and time when this registration begins. Valid formats are either SQL timestamp format (for example, 2009-06-01 10:18:00) or as an integer (for example, 1241187430240).
- expiresTime - the date and time when this registration expires. Valid formats are either SQL timestamp format (for example, 2009-06-01 10:18:00) or as an integer (for example, 1241187430240).
- userData1 - optional customer-defined data.
- userData2 - optional customer-defined data.
- userData3 - optional customer-defined data.

- userData4 - optional customer-defined data.
- userData5 - optional customer-defined data.

Add, Delete, or Update a Registered Device

This request adds or deletes a registered device to the Registration System Administration web page or updates an existing registered device.

Add and Update Operations

The **-add**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **regdevice** value. (See below for a list of **-properties** values.)

For example, the following command will add a registered device.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper regdevice -properties
"applianceGroup=default,userName=jsmith,macAddress=00:90:BF:55
:55:58,stateStr=Approved,ipAddress=10.20.32.18,sponsor=rjones,
sponsorDeviceGroup=Registered Guests"
```

Delete Operations

The **-del**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **regdevice** value.

For example, the following command will delete a registered device.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-del -oper regdevice -properties
"applianceGroup=default,userName=jsmith,macAddress=00:90:BF:55
:55:58"
```

Properties Values

The **-properties** option is a comma-separated list that can include the following values for add, delete, and update operations:

- applianceGroup - (required except for Update operations) the engine group that the registered device belongs to.
- userName - (required except for Update operations) the login identifier of the registered user associated with the registered device. Note that the registered user must exist before the registered device can be successfully created.

- macAddress - (required) the registered device's MAC address.

- stateStr - (required for Add operations) the registered devices's state. Valid values are "Pending," "Approved," "Denied," and "Suspended."

- ipAddress - the registered device's IP address.

- sponsor - the login identifier of the user who is sponsoring the registration of this device.

- sponsorDeviceGroup - the end-system group that the sponsor would like to place the device into.

- startTime - the date and time when this registration begins. Valid formats are either SQL timestamp format (for example, 2009-06-01 10:18:00) or as an integer (for example, 1241187430240).

- description - a description of the registered device.

Reauthenticate an End-System

This request forces the ExtremeControl engines to reauthenticate an end-system so that the end-system can receive its new access policy. Only full MAC addresses are allowed as end-system identifiers for this operation.

The **-oper** and **-endsystem** options are required. The **-oper** option requires the **reauth** value.

For example, the following command forces the reauthentication of the end-system with a MAC address of 11:22:33:44:55:66.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper reauth -endsystem 11:22:33:44:55:66
```

Reauthenticate and Scan an End-System

This request forces the ExtremeControl engines to reauthenticate and scan an end-system so that the end-system can receive its new access policy. Only full MAC addresses are allowed as end-system identifiers for this operation.

The **-oper** and **-endsystem** options are required. The **-oper** option requires the **reauthandscan** value.

For example, the following command will force the reauthentication and scan of the end-system with a MAC address of 11:22:33:44:55:66.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper reauthandscan -endsystem 11:22:33:44:55:66
```

Add a MAC Lock

This request adds a MAC Lock to an end-system. Only full MAC addresses are allowed as end-system identifiers for this operation.

The **-add**, **-oper**, **-endsystem**, **-switch**, and either **-policy** or **-reject** options are all required. The **-oper** option requires the **maclock** value.

For example, the following command will add a MAC lock on the end-system with a MAC address of 11:22:33:44:55:66, specifying the switch and port the end-system will be locked to, and the policy that should be applied if the end-system tries to authenticate on a different switch/port.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper maclock -endsystem 11:22:33:44:55:66 -switch
10.20.30.40 -port ge.1.1 -policy "Deny Access"
```

The following command will add a MAC lock on the end-system with a MAC address of 11:22:33:44:55:66, specifying the switch the end-system will be locked to, and to reject the authentication request if the end-system tries to authenticate on a different switch/port.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper maclock -endsystem 11:22:33:44:55:66 -switch
10.20.30.40 -reject
```

Remove a MAC Lock

This request removes a MAC Lock from an end-system. Only full MAC addresses are allowed as end-system identifiers for this operation.

The **-del**, **-oper**, and **-endsystem** options are all required. The **-oper** option requires the **maclock** value.

For example, the following command will remove the MAC lock on the end-system with a MAC address of 11:22:33:44:55:66.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-del -oper maclock -endsystem 11:22:33:44:55:66
```

Update End-System Custom Fields

This request updates custom field information for a specific end-system based on MAC address. Only full MAC addresses are allowed as end-system identifiers for this operation.

The **-oper**, **-endsystem**, and **-custom1**, **-custom2**, **-custom3**, or **-custom4** options are all required. The **-oper** option requires the **saveinfo** value.

For example, the following command will update custom field 1 for the end-system with a MAC address of 11:22:33:44:55:66 to the value of "asset tag 123."

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper saveinfo -endsystem 11:22:33:44:55:66 -custom1 "asset
tag 123"
```

Export the End-System Table

This request exports the entire end-system table in the Extreme Management Center database to a .csv file.

The **-oper** and **-export** options are required. The **-oper** option requires the **endsystemcsv** value.

For example, the following command will export the entire end-system table to C:\Users\User\exportFile.csv.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper endsystemcsv -export C:\Users\User\exportFile.csv
```

By default, the **endsystemcsv** operation will put quotes around all the properties in the output. If you don't want quotes around the properties, add a **-noquotes** option to the command. For example:

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper endsystemcsv -export C:\Users\User\exportFile.csv
-noquotes
```

Print or Export the Members of an End-System or User Group

This request retrieves all the members of an end-system group, user group, or other rule group, and either prints the contents at the command prompt or

exports the contents to a CSV file.

To print, the **-oper** and **-group** options are required. The **-oper** option requires the **info** value.

The following command will print the members of the Phones group at the command prompt.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper info -group Phones
```

To export, the **-oper**, **-group**, and **-export** options are required. The **-oper** option requires the **info** value.

The following command will export the members of the Phones group to a CSV file.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper info -group Phones -export C:\Users\User\exportFile.csv
```

Delete an End-System in Extreme Management Center

This request deletes an end-system in Extreme Management Center, but allows you to optionally preserve the following related end-system data:

- Custom information
- Group assignment
- MAC locks
- Registration and web authentication

The **-oper** and **-endsystem** options are required. The **-oper** option requires the **esdelete** value.

You can use the following options to delete the end-system but preserve related end-system data. If these options are not used, the information will be deleted by default.

- The **-keepcustom** option deletes the end-system, but keeps the custom information.
- The **-keepingroups** option deletes the end-system, but keeps the group assignments.
- The **-keepmacLocks** option deletes the end-system, but keeps the MAC locks.
- The **-keepreg** option deletes the end-system, but keeps the registration and web authentication.

- The **-donotforce** option deletes the end-system if no errors occur, but does not force the delete of an end-system if an SNMP error occurs on the switch. Additionally, deleting an end-system when an SNMP error occurs on the switch with the **-donotforce** option selected causes the end-system to appear in the end-system table as an end-system error event.

For example, the following command deletes the end-system with a MAC address of 11:22:33:44:55:66 but keeps the end-system's custom information and group assignments.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper esdelete -endsystem 11:22:33:44:55:66 -keepcustom
-keepingroups
```

Display End-System, Extreme Management Center Device, and Registration Info

This request displays end-system, Extreme Management Center device, or registration related information on the console.

The **-oper** option is required, and requires the **info** value.

Either the **-endsystem** option, the **-deviceip** option, or the **-reginfo** option is also required:

- The **-endsystem** option requests end-system info based on the end-system MAC address. The following two options may be used with the **-endsystem** option:
  - The **-ex** option provides an extended set of information for an end-system.
  - The **-hr** option prints the most recent health result and vulnerabilities for an end-system. The output is printed in xml, and is meant to be used by a tool that can parse the xml format and extract the details.
- The **-deviceip** option requests Extreme Management Center device info based on the device IP address.
- The **-reginfo** option provides an extended set of information on the registered device and registered user associated with a MAC address.

For example, the following command will display information on the end-system with a MAC address of 11:22:33:44:55:66.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper info -endsystem 11:22:33:44:55:66
```

The following command will display information on the Extreme Management Center device with an IP address of 10.20.30.40.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper info -deviceip 10.20.30.40
```

The following command will print health result and vulnerabilities information for an endsystem.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-endsystem 11:22:33:44:55:66 -oper info -hr
```

The following command will display information on the registered device and registered user associated with the MAC address of 11:22:33:44:55:66.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper info -reginfo 11:22:33:44:55:66
```

Add, Delete, or Update a Device in Extreme Management Center

This request adds or removes a device to or from Extreme Management Center. It can also be used to update certain device properties in the Extreme Management Center database.

Add Operations

The **-add**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **nsdevice** value.

The **-properties** option is a comma-separated list that can include the following values:

- ip - (required) the device's IP address.
- profileName - (required) the profile assigned to the device.
- snmpContext - the SNMP context that will be assigned to the device. An SNMP context is a collection of MIB objects, often associated with an entity. By specifying the SNMP context, access is allowed to the subset of MIB objects related to that context on the device.
- nickName - the nickname assigned to the device.

For example, the following command adds a device with the IP address of 10.10.20.30 to the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper nsdevice -properties
"ip=10.10.20.30,profileName=public_v1_
Profile,snmpContext=Switch,nickName=My Device"
```

Delete Operations

The **-del**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **nsdevice** value.

The only **-properties** option is the **ip** option (the device's IP address) which is required.

For example, the following command deletes a device with the IP address of 10.10.20.30 from the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-del -oper nsdevice -properties "ip=10.10.20.30"
```

Update Operations

The **-update**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **nsdevice** value.

The **-properties** option is a comma-separated list that can include the following values:

- ip - (required) the device's IP address.
- profileName - the profile assigned to the device.
- snmpContext - the SNMP context assigned to the device. An SNMP context is a collection of MIB objects, often associated with an entity. By specifying the SNMP context, access is allowed to the subset of MIB objects related to that context on the device.
- nickName - the nickname assigned to the device.
- userData1- optional customer-defined data.
- userData2- optional customer-defined data.
- userData3- optional customer-defined data.
- userData4- optional customer-defined data.

For example, the following command updates a device with the IP address of 10.10.20.30.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-update -oper nsdevice -properties
"ip=10.10.20.30,profileName=public_v1_
Profile,snmpContext=Switch,nickName=My.Device,userData1=data1,
userData2=data2,userData3=data3,userData4=data4"
```

Import or Export Devices in Extreme Management Center

This request can be used to import a list of Extreme Management Center devices using a text file created in Extreme Management Center Generated Format (.ngf file) or export a device list from Extreme Management Center to a text file created in Extreme Management Center Generated Format. For more information on Extreme Management Center Generated Format files, see the How to Export and Import a Device List help topic in your Extreme Management Center online help system.

Import Operations

The **-import** and **-oper** options are required. The **-import** option requires the path to the file to import. The **-oper** option requires the **nsdevice** value. The imported file must be in the Extreme Management Center Generated Format (.ngf file).

For example, the following command imports a .ngf file called MyDevices.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-import C:\Users\User\MyDevices.ngf -oper nsdevice
```

Export Operations

The **-export** and **-oper** options are required. The **-export** option requires the path to where the file should be saved. The **-oper** option requires the **nsdevice** value. The exported file is saved in the Extreme Management Center Generated Format (.ngf file).

For example, the following command exports a .ngf file called MyDevices.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-export C:\Users\User\MyDevices.ngf -oper nsdevice
```

Add or Update a Profile in Extreme Management Center

This request adds or updates an Extreme Management Center profile in the Extreme Management Center database. Profiles are used to manage access to your devices. For more information, see the How to Configure Profiles and Credentials help topic in your Extreme Management Center online help system.

Add Operations

The **-add**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **nsprofile** value.

The **-properties** option is a comma-separated list that must include the following values:

- name - (required) the name of the profile.
- snmpVersion - (required for Add operations only) the SNMP protocol version for the profile: SNMPv1 (1), SNMPv2c (2), or SNMPv3 (3).
- read/write/maxAccess - (required) When the version is SNMPv1 or SNMPv2c, the read, write, and
  maxAccess properties specify the community name for each access level. When the version is SNMPv3, the read, write, and maxAccess properties are the credentials specified for each access level.
- authCred - (required) the CLI Credential for this profile. CLI credentials provide support for device management using the command line interface (CLI).

For example, the following command will add an SNMPv1 profile named My Profile to the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper nsprofile -properties "name=My
Profile,snmpVersion=1,read=public_v1,write=public_
v1,maxAccess=public_v1,authCred=Default"
```

In this example, the following command will add an SNMPv3 profile named My Profile to the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper nsprofile -properties "name=My
Profile,snmpVersion=3,read=default_snmp_v3,write=default_snmp_
v3,maxAccess=default_snmp_v3,authCred=Default"
```

Update Operations

The **-update**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **nsprofile** value. The **-properties** option is a comma-separated list that must include the following values:

- name - (required) the name of the profile.
- read/write/maxAccess - (required) When the version is SNMPv1 or SNMPv2c, the read, write, and
  maxAccess properties specify the community name for each access level. When the version is SNMPv3, the read, write, and maxAccess properties are the credentials specified for each access level.
- authCred - (required) the CLI Credential for this profile. CLI credentials provide support for device management using the command line interface (CLI).

For example, the following command will update an SNMPv1 profile named My Profile in the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-update -oper nsprofile -properties "name=My
Profile,read=public_v1,write=public_v1,maxAccess=public_
v1,authCred=Default"
```

In this example, the following command will update an SNMPv3 profile named My Profile in the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-update -oper nsprofile -properties "name=My
Profile,read=default_snmp_v3,write=default_snmp_
v3,maxAccess=default_snmp_v3,authCred=Default"
```

Add or Update a Credential in Extreme Management Center

This request adds or updates an Extreme Management Center credential in the Extreme Management Center database. Credentials are used to manage access to your devices. For more information, see the How to Configure Profiles and Credentials help topic in your Extreme Management Center online help system.

Add Operations

The **-add**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **nscredential** value.

The **-properties** option is a comma-separated list that can include the following values:

- name - (required) the name of the credential.
- snmpVersion - (required) the SNMP protocol version for the credential: SNMPv1 (1), SNMPv2c (2), or SNMPv3 (3).
- communityName - (required) for SNMPv1 or SNMPv2c credentials, this is the community name used for device access.
- userName - (required) for SNMPv3 credentials, this is the User Name used for device access.
- authPassword - for SNMPv3 credentials, the password that is used to determine authentication.
- authType - for SNMPv3 credentials, the authType is MD5, SHA1, or None.
- privPassword - for SNMPv3 credentials, the password that is used to determine privacy.
- privType - for SNMPv3 credentials, the privType is DES, AES, or None.

For example, the following command will add an SNMPv1 credential named My Credential to the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper nscredential -properties "name=My
Credential,snmpVersion=1,communityName=some name"
```

In this example, the following command adds an SNMPv3 credential named My Credential to the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper nscredential -properties "name=My
Credential,snmpVersion=3,userName=admin,authPassword=pass,auth
Type=SHA1,privPassword=pass,privType=DES"
```

Update Operations

The **-update**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **nscredential** value.

The **-properties** option is a comma-separated list that can include the following values:

- name - (required) the name of the credential.
- communityName - (required) for SNMPv1 or SNMPv2c credentials, this is the community name used for device access.
- userName - (required) for SNMPv3 credentials, this is the User Name used for device access.
- authPassword - for SNMPv3 credentials, the password that is used to determine authentication.
- authType - for SNMPv3 credentials, the authType is MD5, SHA1, or None.
- privPassword - for SNMPv3 credentials, the password that is used to determine privacy.
- privType - for SNMPv3 credentials, the privType is DES, AES, or None.

For example, the following command updates an SNMPv1 credential named My Credential in the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-update -oper nscredential -properties "name=My
Credential,communityName=some name"
```

In the next example, the command updates an SNMPv3 credential named My Credential in the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-update -oper nscredential -properties "name=My
Credential,userName=admin,authPassword=pass,authType=SHA1,priv
Password=pass,privType=DES"
```

Add or Update a CLI Credential in Extreme Management Center

This request adds or updates a CLI credential in the Extreme Management Center database. Credentials are used to manage access to your devices. For more information, see the How to Configure Profiles and Credentials help topic in your Extreme Management Center online help system.

Add Operations

The **-add**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **clicredential** value.

The **-properties** option is a comma-separated list that must include the following values:

- userName - (required) the user name used for device access.
- description - (required) a description of the CLI credential.
- loginPassword - (required) the password required to start a CLI session.
- enablePassword - (required) the password for entering Enable mode.
- configurationPassword - (required) the password for entering Configure mode.
- type - (required) The communication protocol used for the connection (SSH or Telnet).

For example, the following command will add a CLI credential for a group of switches to the Extreme Management Center database.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper clicredential -properties
"userName=admin,description=East Wing
Switches,loginPassword=abc123, enablePassword=abc123,
configurationPassword=abc123, type=SSH"
```

Update Operations

The **-update**, **-oper**, and **-properties** options are all required. The **-oper** option requires the **clicredential** value.

The **-properties** option is a comma-separated list that can include the following values:

- userName - (required) the user name used for device access.
- description - (required) a description of the CLI credential.
- loginPassword - the password required to start a CLI session.
- enablePassword - the password for entering Enable mode.
- configurationPassword - the password for entering Configure mode.
- type - the communication protocol used for the connection (SSH or Telnet).

For example, the following command will update the loginPassword in a CLI credential for a group of switches.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-update -oper clicredential -properties
"userName=admin,description=East Wing
Switches,loginPassword=updatedPassabc123"
```

Update the NAC Request Tool Truststore

If you change the Extreme Management Center server certificate, the NAC Request Tool may no longer be able to connect to the Extreme Management Center server. This operation configures the NAC Request Tool to trust the Extreme Management Center server's certificate, and allow you to continue to use the NAC Request Tool.

The **-oper** option is required and uses the **acceptcert** value.

For example, the following command updates the local NAC Request Tool Truststore with the Extreme Management Center server certificate.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-oper acceptcert
```

Display Version Information

Use the following commands to display the NAC Request Tool version information.

For Windows:

```
NacRequest.bat -version
```

For Linux:

```
./NacRequest.sh -version
```

Use the Timeout Option

This option allows you specify a time in milliseconds before the request is terminated. For example, the following command includes a timeout value of 10 seconds (10000 milliseconds) for an end-system information request.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-timeout 10000 -oper info -endsystem 00:11:FB:55:55:61
```

Using a CSV File

A CSV file can be used to run multiple commands of the same operation type using the -csv option. For example, multiple MAC addresses can be added to end-system groups, multiple users can be added to user groups, or multiple end-systems can be reauthenticated. However, multiple operations of different types cannot be combined in one CSV file, and the info operation cannot be run using the -csv option.

NOTES: If a CSV file operation errors out, none of the entries in the file will be processed and added to the Extreme Management Center server.

End-systems assigned to one or more existing end-system groups being added to a new end-system group using the –add option when importing using a CSV file remain a member of the ExtremeControl end-system groups to which they are already assigned.

For example, the following command will send the contents of the CSV file "nacreq.csv" to NAC Manager to be processed in one add end-system override operation.

```
NacRequest -server 10.20.33.2 -username admin -password pswd1
-add -oper esoverride -csv nacreq.csv
```

CSV File Formats

Following are examples of possible CSV file formats.

Add or Delete End-System Override Operations

You can add or delete end-systems using a full MAC address, IP address, or hostname. If you are using IP address or hostname, you must include the **-type** option in the command line (e.g. -type "FULL_IP" or -type "HOSTNAME").

#macAddress, end-system group, description
00:90:BF:55:55:58, PrinterList, north side printer
00:90:BF:55:55:59, PrinterList, south side printer
00:90:BF:55:55:60, Registered Devices, user-xp1

#ipAddress, end-system group, description
10.20.30.40, PrinterList, north side printer

11.22.33.44, PrinterList, south side printer
12.23.34.44, Registered Devices, user-xp1

#hostname, end-system group, description
North Printer, PrinterList, north side printer
South Printer, PrinterList, south side printer
User-xp1, Registered Devices, 12.23.34.44

When adding end-systems using the custom data fields, only MAC addresses can be specified.

#macAddress, end-system group, custom1, custom2, custom3, custom4
00:90:BF:55:55:57, PrinterList, North Campus, Math Building, Floor 1, South Side
00:90:BF:55:55:58, PrinterList, North Campus, Math Building, Floor 2, South Side
00:90:BF:55:55:59, PrinterList, North Campus, Math Building, Floor 2, North Side

For a delete operation, the description is optional.

#macAddress, end-system group
00:90:BF:55:55:58, PrinterList
00:90:BF:55:55:59, PrinterList

For an add end-system to group and reauthenticate operation or a delete end-system from group and reauthenticate operation, you must use a MAC address. The description is optional.

#macAddress, end-system group
00:90:BF:55:55:58, PrinterList
00:90:BF:55:55:59, PrinterList

Add or Delete User Override Operations

For both add and delete operations, the description is optional.

#username, user group, description
rjones, registereduser, enterprise user
tsmith, guest, guest user

Add, Update, or Delete Registered Users Operations

#properties
applianceGroup=default,userName=rjones,firstName=Ron,lastName=Jones
applianceGroup=default,userName=tsmith,firstName=Tom,lastName=Smith

For delete operations, only the applianceGroup and userName properties are required.

#properties
applianceGroup=default,userName=rjones
applianceGroup=default,userName=tsmith

Add, Update, or Delete Registered Devices Operations

#properties
applianceGroup=default,userName=rjones,macAddress=00:00:00:00:00:01,stateStr=Approved
applianceGroup=default,userName=tsmith,macAddress=00:00:00:00:00:02,stateStr=Approved

Reauthentication Operation

For a reauthentication operation, only MAC addresses can be specified.

#macAddress
00:90:BF:55:55:58
00:90:BF:55:55:59

Reauthentication and Scan Operation

For a reauthentication and scan operation, only MAC addresses can be specified.

#macAddress
00:90:BF:55:55:58
00:90:BF:55:55:59

Logging

The NAC Request Tool uses log4j as its logging utility and any output is automatically placed in a log4j file in the location specified in the log4j.properties file. You must put the log4j.properties file in the directory where you installed the NAC Request Tool.

Return Codes

Following the completion of a command, the NAC Request Tool returns a code indicating that the operation was successful or that an error occurred during the operation. Detailed error information will be included with the code, if available. Following is a list of possible return codes and their meaning.

Return Codes

Return Code	Description
0	The command was successful.
1	The requested object does not exist.
2	The action cannot be performed because the object already exists.
3	A parameter value is invalid.
4	An error occurred parsing an input string.
5	The result would be an invalid configuration.
6	Indicates an error using a remote connection.
7	Indicates an unexpected error condition.
8	The group parameter object does not exist.
9	Indicates a generic CSV operation error occurred.
246	Indicates an authorization failure.
247	Indicates there was no response from the Web Service.
248	The request timed out.
249	The connection was reset.
250	The connection was refused.
251	Indicates a generic command line error.
252	The NAC Request Tool could not get a reference to the Web Service.
253	The IP address of the Extreme Management Center Server is required, but was not provided.
254	The user's Extreme Management Center username is required, but was not provided.
255	The user's Extreme Management Center password is required, but was not provided.

Getting Help

If you require assistance, contact Extreme Networks Global Technical Assistance Center using one of the following methods.

Web	www.extremenetworks.com/support/
Phone	1-800-872-8440 (toll-free in U.S. and Canada) or 1-603-952-5000 For the Extreme Networks Support phone number in your country: www.extremenetworks.com/support/contact/
Email	support@extremenetworks.com

Revision History

Following is a list of revisions for this document.

Revision History

Date	Description
2-28-14	Updated document for NetSight version 6.0 to incorporate new Extreme Networks logo and Notice.
6-17-14	Updated document for NetSight version 6.1 to incorporate new Extreme Networks Notice.
1-28-15	Updated documented for NetSight version 6.2.
7-21-15	Updated document for NetSight version 6.3.
1-5-16	Added note about adding an end-system to an end-system group.

PN: 9036405-00

Notice

Legal Notices

notice. The reader should in all cases consult representatives of Extreme Networks to determine whether any such changes have been made.

The hardware, firmware, software or any specifications described or referred to in this document are subject to change without notice.

Trademarks

Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries.

All other names (including any product names) mentioned in this document are the property of their respective owners and may be trademarks or registered trademarks of their respective companies/owners.

For additional information on Extreme Networks trademarks, please see: www.extremenetworks.com/company/legal/trademarks/

Support

For product support, including documentation, visit: www.extremenetworks.com/support/

Contact

Extreme Networks, Inc.,
6480 Via Del Oro
San Jose, CA 95119
Tel: +1 408-579-2800

Toll-free: +1 888-257-3000