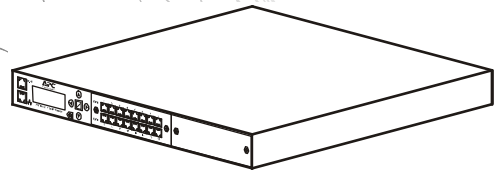


# Command Reference Guide

## Remote Console Manager

AP5620  
AP5621





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# Overview

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Information in this document is subject to change without notice.

## Target audience

This guide is intended for trained, qualified network support technicians. At a minimum, you should be familiar with Ethernet technology and terminology as it applies to local area network access.

## Typographical conventions

The following conventions are used in this guide.

Sample text from the command line interface (CLI) is presented in `this font`. Text that you enter is presented in **this font**. For example:

```
[admin@A101100303]# show who
admin ssh Mar 22 13:38 (172.30.235.126)
```

Keyboard characters are enclosed in angle brackets. For example, press <Enter>.

## Safety



**Warning:** Follow all cautions and warnings to protect the RC Manager from potential damage or loss of data, and to ensure your own safety.



**Warning:** Follow all federal, state, and local regulations when disposing of this product.



**Caution:** Read the installation instructions before you connect the RC Manager to a power source.

Read and understand the following instructions before using the RC Manager:

- Only use electrical extension cords with a current rating at least equal to that of the RC Manager.
- Always disconnect the RC Manager from power before cleaning and servicing.
- Do not spray liquids directly onto the RC Manager when cleaning. Always apply the liquid first to a static free cloth.
- Do not immerse the RC Manager in any liquid or place any liquids on it.
- Do not disassemble this RC Manager. To reduce the risk of shock and to maintain the warranty on the RC Manager, a qualified technician must perform service or repair work.
- Connect this RC Manager to a grounded outlet.
- Only connect the RC Manager to surge-protected power outlets.
- Keep ventilation openings free of any obstructions.

Save these instructions.

# Hardware Information

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## Port Usage

The RC Manager uses the following ports.

Function	Port (TCP unless otherwise stated)
device ports	2001–20xx (configurable)
file export	configurable
NTP	UDP port 123
Pulse (echo)	7 (configurable)
RADIUS	1812 (configurable)
SNMP	161 (configurable)
SMTP mail server	25 (configurable)
SSH	22 (configurable) <b>Note:</b> Change requires reboot.
Syslog	514 (configurable)
TACACS	49 (configurable)
Telnet	23 (configurable) <b>Note:</b> Change requires reboot.
xbrowser	80 or 443 (configurable)

# Supported Makes, Models, and Operating Systems

This section lists products that can be configured on the port, powercontrol, and modem resources.

## Products that can be configured on device ports

Manufacturer	Operating systems	Model series	Models
3Com <sup>®</sup>	3300		
Alcatel <sup>®</sup>		OmniSwitch	
Cisco <sup>®</sup>	ASA CatOS IOS <sup>®</sup> Pix <sup>®</sup>	1700 Series Modular Access Routers	OS versions 12.2–12.3: 1701, 1711, 1712, 1721, 1751, 1751-V, 1760 OS versions 12.0–12.3: 1720, 1750
		1800 Series Integrated Services Routers	OS version 12.3: 1801, 1802, 1803, 1811, 1812, 1841
		2600 Series Multiservice Platforms	OS versions 11.3–12.3: 2610, 2611, 2613 OS versions 12.0–12.3: 2620, 2621 OS versions 12.1–12.3: 2610XM, 2611XM, 2620XM, 2621XM, 2650, 2650XM, 2651, 2651XM OS versions 12.2–12.3: 2691, 2691XM
		2800 Series Integrated Services Routers	OS version 12.3: 2801, 2811, 2821, 2851
		3600 Series Multiservice Platforms	OS versions 11.2P–12.3: 3620, 3640 OS versions 12.0–12.3: 3631, 3660, 3661, 3662
		3700 Series Multiservice Access Routers	OS versions 12.2–12.3: 3725, 3745
		3800 Series Integrated Services Routers	OS version 12.2: 3825, 3845
		7200 Series Routers	OS versions 12.0–12.3: 7202, 7202VXR, 7204, 7204VXR, 7206, 7206VXR
		7500 Series Routers	OS versions 12.0–12.3: 7503, 7507, 7513

<b>Manufacturer</b>	<b>Operating systems</b>	<b>Model series</b>	<b>Models</b>
		12000 Series Routers	OS versions 12.0–12.3: 12008, 12016, 12408, 12416, 12808, 12816
		Catalyst® 2900XL Series	OS versions 11.2.8SA4–12.0.5WC9: 2924XL, 2924C-XL, 2916M-XL, 2912XL, 2908XL
		Catalyst 2950 Series	OS versions 12.0.5.2–12.1.20: 2950-24, 2950-12, 2950C-24, 2950G-48 OS versions 12.1.12–12.1.20: 2955C-12, 2955S-12, 2955T-12
		Catalyst 2950LRE Series	OS versions 12.1.11–12.1.20: 2950ST-8-LRE, 2950ST-24-LRE
		Catalyst 2970 Series	OS versions 12.1.11–12.1.19: 2970G-24T, 2970G-24TS
		Catalyst 3500 XL Series	OS versions 11.2.8SA6–12.0.5WC9: 3508G-XL, 3512XL, 3524XL, 3524PWR-XL, 3548XL
		Catalyst 3550 Series	OS versions 12.1.6–12.1.20: 3550-48 SMI, 3550-48 EMI, 3550-24-SMI, 3550-24-EMI, 3550-24-FX-SMI, 3550-24-PWR, 3550-12G, 3550-12T
		Catalyst 3560 Series	OS version 12.1.19: 3560-24PS-E, 3560-24PS-S, 3560-48PS-E, 3560-48PS-S
		Catalyst 3750 Series	OS versions 12.1.14–12.1.19: 3750-24PS, 3750-24T, 3750-24TS, 3750-48PS, 3750-48TS, 3750G-12S, 3750G-16TD, 3750G-24TS
		Catalyst 4000 Series	OS versions 6.1.4–current: 4003, 4006
		Catalyst 4500 Series	OS versions 7.x.y–current: 4503 OS versions 12.1 – current: 4506, 4507R, 4510R
		Catalyst 5000 Series (Supervisor III)	OS versions 6.1.4–current: 5002, 5005, 5009
		Catalyst 5500 Series (Supervisor III)	OS versions 6.1.4–current: 5505, 5509

<b>Manufacturer</b>	<b>Operating systems</b>	<b>Model series</b>	<b>Models</b>
		Catalyst 6000 Series	OS versions 6.1.4 – current, 12.1-current: 6006, 6009
		Catalyst 6500 Series	OS versions 6.1.4 – current, 12.1-current: 6503, 6506, 6509, 6513
		Cisco PIX <sup>®</sup> firewalls	OS versions 6.2 – 6.3: PIX 501, PIX 506/506e, PIX 515/515e, PIX 520, PIX 525, PIX 535
Comtech <sup>®</sup> EF Data			CDM-570/570L Satellite Modem
Garmin <sup>®</sup>			GPS receiver
HP <sup>®</sup>	Linux <sup>®</sup> Windows <sup>®</sup>		
iDirect <sup>®</sup>	infinity netmodem		
Juniper <sup>®</sup>	JUNOS <sup>®</sup>		OS versions 6.0 – 6.4: M5/M7/M7i, M10/M10i, M20, M40/M40e, M160, M320, T320, T640
ND SatCom			SkyWAN IDU 2000, SkyWAN IDU 5000
Netscreen <sup>®</sup>			
Nortel <sup>®</sup>	BayRS <sup>®</sup>		OS versions 11.0 – 15.6: Access Network (AN), Advanced Remote Note (ARN), Access Stack Node (ASN), Passport 2430
Sun <sup>®</sup>	Solaris <sup>™</sup>		
Tasman	TiOS		OS versions 5.0 – 8.0: 1200, 1400, 1450, 4100, 4102, 6200, 6300/6302, 7030
TippingPoint	TOS		OS version 1.4: UnityOne-50, UnityOne-100, UnityOne-200, UnityOne-400, UnityOne-1200, UnityOne-2000, UnityOne-2400, UnityOne-5000

## Generic port device types

- native
- PPP
- server
- tcp

## Products that can be configured on the powercontrol resource

Manufacturer	Operating systems
APC	Switched Rack PDU (this field displays <b>aos</b> for RC Managers running firmware version 3.4) MasterSwitch VM

Other products may be supported but have not been fully tested by APC.



**Note:** For RC Managers running firmware version 3.4, the Switched Rack PDU OS field displays **aos**. For RC Managers running a higher firmware version, the **os** field displays **switched rack pdu**.

## Serial cable pinouts

This section provides cable pin-outs for connecting the RC Manager to some common devices.

### IBM RS-6000

RC Manager device port (RJ-45 m)		IBM RS-6000 (DB-9)
Signal	Pin	Pin
RTS	1	1
DTR	2	2
TxD	3	3
GND	4	
GND	5	
RxD	6	4
DSR	7	
CTS	8	



**HP 9000**

RC Manager device port (RJ-45 m)		HP9000 (DB-9)
Signal	Pin	Pin
RTS	1	1
DTR	2	2
TxD	3	3
GND	4	4
GND	5	5
RxD	6	6
DSR	7	7
CTS	8	8
		9

**DCE adapter—RJ-45 to DB-9**

RC Manager device port (RJ-45 m)		DB-9
Signal	Pin	Pin
RTS	1	7
DTR	2	4
TxD	3	3
GND	4	5
GND	5	5
RxD	6	2
DSR	7	1
CTS	8	8

**DCE adapter—RJ-45 to DB-25**

RC Manager device port (RJ-45 m)		DB-25
Signal	Pin	Pin
RTS	1	4
DTR	2	20
TxD	3	2
GND	4	7
GND	5	7
RxD	6	3
DSR	7	8
CTS	8	5

## Serial cable pinouts for power control units

### APC RJ-45 to RJ-12 (AP79xx series)

RC Manager device port (RJ-45 m)		APC RJ-12 m
Signal	Pin	Pin
RTS	1	
DTR	2	
TxD	3	4
GND	4	5
GND	5	
RxD	6	3
DSR	7	
CTS	8	

### APC RJ-45 to DB-9 (MasterSwitch VM)

RC Manager device port (RJ-45 m)		APC MasterSwitch (DB-9)
Signal	Pin	Pin
RTS	1	8
DTR	2	7
TxD	3	6
GND	4	5
GND	5	4
RxD	6	3
DSR	7	2
CTS	8	1
		9

## Maximum cable lengths

The RC Manager meets all applicable specifications for external cable lengths.

Type of cable	Maximum supported length
Ethernet	100 m (330 ft)
Serial (RS-232)–Port device, external modem, or power controller	15 m (50 ft)
Serial (RS-485)–Port device, external modem, or power controller	1200 m (4000 ft)

## Modem codes

The following country codes are used to provision the RC Manager's modem in various countries. If no code is given, either there are no standards or the modem is not approved for use in that country. The command AT+GCI= must prefix the value of the code.

Country	Abbreviation	Modem code
AFGHANISTAN	AFG	(none)
ALBANIA	ALB	(none)
ALGERIA	DZA	(none)
AMERICAN SAMOA	ASM	(none)
ANDORRA	AND	(none)
ANGOLA	AGO	(none)
ANGUILLA	AIA	(none)
ANTARCTICA	ATA	(none)
ANTIGUA AND BARBUDA	ATG	(none)
ARGENTINA	ARG	7
ARMENIA	ARM	(none)
ARUBA	ABW	(none)
AUSTRALIA	AUS	9
AUSTRIA	AUT	fd
AZERBAIJAN	AZE	(none)
BAHAMAS	BHS	(none)
BAHRAIN	BHR	(none)
BANGLADESH	BGD	(none)
BARBADOS	BRB	(none)
BELARUS	BLR	(none)
BELGIUM	BEL	fd
BELIZE	BLZ	(none)
BENIN	BEN	(none)
BERMUDA	BMU	(none)
BHUTAN	BTN	(none)
BOLIVIA	BOL	(none)
BOSNIA AND HERZEGOVINA	BIH	(none)
BOTSWANA	BWA	(none)
BOUVET ISLAND	BVT	(none)
BRAZIL	BRA	16
BRITISH INDIAN OCEAN TERRITORY	IOT	(none)
BRUNEI DARUSSALAM	BRN	(none)
BULGARIA	BGR	(none)
BURKINA FASO	BFA	(none)
BURUNDI	BDI	(none)

<b>Country</b>	<b>Abbreviation</b>	<b>Modem code</b>
CAMBODIA	KHM	(none)
CAMEROON	CMR	(none)
CANADA	CAN	b5
CAPE VERDE	CPV	(none)
CAYMAN ISLANDS	CYM	(none)
CENTRAL AFRICAN REPUBLIC	CAF	(none)
CHAD	TCD	(none)
CHILE	CHL	99
CHINA	CHN	b5
CHRISTMAS ISLAND	CXR	(none)
COCOS KEELING ISLANDS	CCK	(none)
COLOMBIA	COL	(none)
COMOROS	COM	(none)
CONGO, Democratic Republic of (was Zaire)	COD	(none)
CONGO, People's Republic of	COG	(none)
COOK ISLANDS	COK	(none)
COSTA RICA	CRI	(none)
COTE D'IVOIRE	CIV	(none)
CROATIA	HRV	(none)
CUBA	CUB	(none)
CYPRUS	CYP	fd
CZECH REPUBLIC	CZE	fd
DENMARK	DNK	fd
DJIBOUTI	DJI	(none)
DOMINICA	DMA	(none)
DOMINICAN REPUBLIC	DOM	(none)
EAST TIMOR	TLS	(none)
ECUADOR	ECU	(none)
EGYPT	EGY	(none)
EL SALVADOR	SLV	(none)
EQUATORIAL GUINEA	GNQ	(none)
ERITREA	ERI	(none)
ESTONIA	EST	fd
ETHIOPIA	ETH	(none)
FALKLAND ISLANDS MALVINAS	FLK	(none)
FAROE ISLANDS	FRO	(none)
FIJI	FJI	(none)
FINLAND	FIN	fd
FRANCE	FRA	fd
FRANCE, METROPOLITAN	FXX	fd
FRENCH GUIANA	GUF	(none)
FRENCH POLYNESIA	PYF	(none)
FRENCH SOUTHERN TERRITORIES	ATF	(none)

Country	Abbreviation	Modem code
GABON	GAB	(none)
GAMBIA	GMB	(none)
GEORGIA	GEO	(none)
GERMANY	DEU	fd
GHANA	GHA	(none)
GIBRALTAR	GIB	(none)
GREECE	GRC	fd
GREENLAND	GRL	(none)
GRENADA	GRD	(none)
GUADELOUPE	GLP	(none)
GUAM	GUM	(none)
GUATEMALA	GTM	(none)
GUINEA	GIN	(none)
GUINEA-BISSAU	GNB	(none)
GUYANA	GUY	(none)
HAITI	HTI	(none)
HEARD AND MCDONALD ISLANDS	HMD	(none)
HONDURAS	HND	(none)
HONG KONG	HKG	99
HUNGARY	HUN	fd
ICELAND	ISL	fd
INDIA	IND	99
INDONESIA	IDN	99
IRAN	IRN	(none)
IRAQ	IRQ	(none)
IRELAND	IRL	fd
ISRAEL	ISR	b5
ITALY	ITA	fd
JAMAICA	JAM	(none)
JAPAN	JPN	0
JORDAN	JOR	(none)
KAZAKHSTAN	KAZ	(none)
KENYA	KEN	(none)
KIRIBATI	KIR	(none)
KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF	PRK	(none)
KOREA, REPUBLIC OF	KOR	b5
KUWAIT	KWT	(none)
KYRGYZSTAN	KGZ	(none)

Country	Abbreviation	Modem code
LAO PEOPLE'S DEMOCRATIC REPUBLIC	LAO	(none)
LATVIA	LVA	fd
LEBANON	LBN	(none)
LESOTHO	LSO	(none)
LIBERIA	LBR	(none)
LIBYAN ARAB JAMAHIRIYA	LBY	(none)
LIECHTENSTEIN	LIE	fd
LITHUANIA	LTU	fd
LUXEMBOURG	LUX	fd
MACAU	MAC	(none)
MACEDONIA (THE FORMER YUGOSLAV REPUBLIC OF)	MKD	(none)
MADAGASCAR	MDG	(none)
MALAWI	MWI	(none)
MALAYSIA	MYS	6c
MALDIVES	MDV	(none)
MALI	MLI	(none)
MALTA	MLT	fd
MARSHALL ISLANDS	MHL	(none)
MARTINIQUE	MTQ	(none)
MAURITANIA	MRT	(none)
MAURITIUS	MUS	(none)
MAYOTTE	MYT	(none)
MEXICO	MEX	b5
MICRONESIA, FEDERATED STATES OF	FSM	(none)
MOLDOVA, REPUBLIC OF	MDA	(none)
MONACO	MCO	(none)
MONGOLIA	MNG	(none)
MONTSERRAT	MSR	(none)
MOROCCO	MAR	(none)
MOZAMBIQUE	MOZ	(none)
MYANMAR	MMR	(none)
NAMIBIA	NAM	(none)
NAURU	NRU	(none)
NEPAL	NPL	(none)
NETHERLANDS	NLD	fd
NETHERLANDS ANTILLES	ANT	(none)
NEW CALEDONIA	NCL	(none)
NEW ZEALAND	NZL	7e
NICARAGUA	NIC	(none)
NIGER	NER	(none)
NIGERIA	NGA	(none)
NIUE	NIU	(none)
NORFOLK ISLAND	NFK	(none)
NORTHERN MARIANA ISLANDS	MNP	(none)
NORWAY	NOR	fd

<b>Country</b>	<b>Abbreviation</b>	<b>Modem code</b>
OMAN	OMN	(none)
PAKISTAN	PAK	(none)
PALAU	PLW	(none)
PALESTINIAN TERRITORY	PSE	(none)
PANAMA	PAN	(none)
PAPUA NEW GUINEA	PNG	(none)
PARAGUAY	PRY	(none)
PERU	PER	(none)
PHILIPPINES	PHL	b5
PITCAIRN	PCN	(none)
POLAND	POL	fd
PORTUGAL	PRT	fd
PUERTO RICO	PRI	(none)
QATAR	QAT	(none)
REUNION	REU	(none)
ROMANIA	ROU	(none)
RUSSIAN FEDERATION	RUS	fd
RWANDA	RWA	(none)

Country	Abbreviation	Modem code
SAINT KITTS AND NEVIS	KNA	(none)
SAINT LUCIA	LCA	(none)
SAINT VINCENT AND THE GRENADINES	VCT	(none)
SAMOA	WSM	(none)
SAN MARINO	SMR	(none)
SAO TOME AND PRINCIPE	STP	(none)
SAUDI ARABIA	SAU	(none)
SENEGAL	SEN	(none)
SEYCHELLES	SYC	(none)
SIERRA LEONE	SLE	(none)
SINGAPORE	SGP	9c
SLOVAKIA (Slovak Republic)	SVK	fd
SLOVENIA	SVN	fd
SOLOMON ISLANDS	SLB	(none)
SOMALIA	SOM	(none)
SOUTH AFRICA	ZAF	9f
SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS	SGS	(none)
SPAIN	ESP	fd
SRI LANKA	LKA	(none)
ST. HELENA	SHN	(none)
ST. PIERRE AND MIQUELON	SPM	(none)
SUDAN	SDN	(none)
SURINAME	SUR	(none)
SVALBARD AND JAN MAYEN ISLANDS	SJM	(none)
SWAZILAND	SWZ	(none)
SWEDEN	SWE	fd
SWITZERLAND	CHE	fd
SYRIAN ARAB REPUBLIC	SYR	(none)
TAIWAN	TWN	fe
TAJIKISTAN	TJK	(none)
TANZANIA, UNITED REPUBLIC OF	TZA	(none)
THAILAND	THA	b5
TOGO	TGO	(none)
TOKELAU	TKL	(none)
TONGA	TON	(none)
TRINIDAD AND TOBAGO	TTO	(none)
TUNISIA	TUN	(none)
TURKEY	TUR	fd
TURKMENISTAN	TKM	(none)
TURKS AND CAICOS ISLANDS	TCA	(none)
TUVALU	TUV	(none)



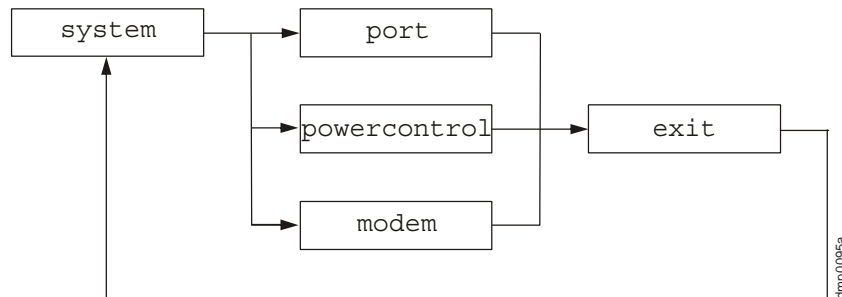
<b>Country</b>	<b>Abbreviation</b>	<b>Modem code</b>
UGANDA	UGA	(none)
UKRAINE	UKR	(none)
UNITED ARAB EMIRATES	ARE	(none)
UNITED KINGDOM	GBR	fd
UNITED STATES	USA	b5
UNITED STATES MINOR OUTLYING ISLANDS	UMI	(none)
URUGUAY	URY	(none)
UZBEKISTAN	UZB	(none)
VANUATU	VUT	(none)
VATICAN CITY STATE HOLY SEE	VAT	(none)
VENEZUELA	VEN	(none)
VIET NAM	VNM	(none)
VIRGIN ISLANDS BRITISH	VGB	(none)
VIRGIN ISLANDS U.S.	VIR	(none)
WALLIS AND FUTUNA ISLANDS	WLF	(none)
WESTERN SAHARA	ESH	(none)
YEMEN	YEM	(none)
YUGOSLAVIA	YUG	(none)
ZAMBIA	ZMB	(none)
ZIMBABWE	ZWE	(none)



# Command Reference

## CLI Structure

The command line interface (CLI) employs a hierarchy for organizing the system chassis, ports, power controllers, and modems. These are called resources. The `system` resource is the root of the CLI.



To return to the `system` resource from another resource, use the `exit` command.

Resource	Description	Command
<code>system</code>	This is the root resource. All chassis configuration and user management functions are accessed from this resource.	<code>exit</code> (from another resource)
<code>port</code>	Allows you to configure and manage a device connected to a port on the system.	<code>port &lt;slot/number&gt;</code>
<code>powercontrol</code>	Allows you to configure and manage an external power controller and mapping its outlets to devices managed by the system.	<code>powercontrol</code>
<code>modem</code>	Allows you to configure the embedded modem or an external modem.	<code>modem</code>

Many of the commands in this guide are specific to a particular resource, which is listed in the Resource section of the command description.

## Command Shortcuts

The system's CLI provides several ways to reduce the amount of typing required in the command line.

### Repeating commands

To repeat the most recent command, press the up-arrow key and then the <Enter> key.

### Abbreviating commands

The CLI allows you to abbreviate commands to the shortest string that uniquely identifies the command.

For example, you can shorten the `ping` command to `pi`. Similarly, you can shorten `show dashboard` to `sh das`.

You cannot shorten the **ping** command to **p**; this results in an error because it also matches all other commands beginning with the letter p. Similarly, you cannot shorten **show dashboard** to **sh da** because this string also matches **show date**.

In general, you cannot abbreviate command parameters; you must type them as shown. In the example below, the CLI accepts abbreviations in the **config system keypad** command but not in the **enable** parameter.

```
[tmcmillan@xyzcowk01]# conf sys key en
usage: keypad <enable|disable>
[tmcmillan@xyzcowk01]# conf sys key enable
Keypad Configuration: enabled
```

The exception is **shutdown**. To minimize the potential for accidental shutdown, this command is not accepted if it is abbreviated.

## Using wild cards

The system's CLI allows you to use the **\*** character as a wildcard. For example, you can issue the command **show rule cpu\*** to view all rules that have names starting with **cpu**.

## Paging through command feedback

Some commands return large amounts of information. When reviewing long displays of command feedback, you can type **<** to return to the beginning of the display, or **>** to go to the end.

## Canceling out of interactive commands

Use the **<Ctrl> c** command to exit interactive commands without saving changes.

# Redirecting Command Output to a File

Some **show** commands return more information than is practical to view in the CLI window. For example, the **show all** command will produce several screens of output and the **show buffer** command will typically produce several hundred screens; in these cases you may prefer to copy the output to a file that you can examine later.

You can use the pipe character **|** to redirect the output of a command using FTP or SCP. The syntax is:

```
<"command"> | <ftp | scp> username@host:/filepath/
```

For example, you could use SCP to redirect the output of the **show config** command to another computer, where **username@host:/filepath/** specifies the destination for the data:

```
show config | scp username@host:/filepath/
```

You can get help on using the pipe redirect by entering **| ?** in the command line.

# Viewing Context-sensitive Help

To view a list of available commands from any resource within the CLI, type `?`. The system displays the commands allowed by any role you have on the current resource.

```
[admin@xyzcoWK01]# ?
RC Manager v3.4
config                Edit settings
connect              Connect to another RC Manager
enable              Re-authenticate as another user
history            Show command history
logout            Exit RC Manager
modem              Commands specific to modem
page-length        Configure page length
ping              Run the ping command
port              Commands specific to port
powercontrol       Commands specific to powercontrol
restart           Restart RC Manager
show              show system configuration
shutdown          Shutdown RC Manager
suspend           Suspend heartbeat and pulse processes
```

To show command usage notes, type the command and then `?`.

```
[admin@xyzcoWK01]# port ?
usage: port <port slot/number>
Usage notes allow you to drill down into a command:
[admin@xyzcoWK01 (port1/1)]# config ?
RC Manager v3.4

info                Device information wizard
init               Port setup wizard
log                Edit log settings
monitors           Monitor data wizard
properties         Edit multiple properties for device
protocols          Edit protocol settings
removejob          Remove scheduled job
serial             Serial connection wizard
settings           Settings wizard

[admin@xyzcoWK01 (port1/1)]# config protocols ?
RC Manager v3.4

pass-through       Edit pass-through settings
shadow            Echo device output to socket
```

# List of Commands You Can Automate

Command	Description
<code>clear counters</code>	Clears all interface counters on the device. See “clear counters” on page 31.
<code>clear password</code>	Clears the password on a device. See “clear password” on page 32.
<code>clear service-module</code>	Resets the device’s Telco interface and forces renegotiation. See “clear service-module” on page 33.
<code>power</code>	Manages power from the device's perspective after you configure the power controller. See “power” on page 84.
<code>ppp</code>	Establishes or ends out-of-band dial-up management connectivity. See “ppp” on page 85.
<code>pull running-config</code>	Pulls configuration files from network devices. See “pull running-config” on page 87.
<code>pull startup-config</code>	Pulls configuration files from network devices. See “pull startup-config” on page 88.
<code>push os</code>	Pushes operating system files to network devices. See “push os” on page 90.
<code>push running-config</code>	Pushes configuration files to network devices. See “push running-config” on page 91.
<code>push startup-config</code>	Pushes configuration files to network devices. See “push startup-config” on page 92.
<code>reboot</code>	Reboots the device connected to the specified port. See “reboot” on page 93.
<code>restart</code>	Restarts the RC Manager. See “restart” on page 94.



**Note:** You can also automate target device commands. For information about automating commands for a device connected to the RC Manager, see the command reference documentation for that device.

# List of Commands Used in the System Resource

?  
config backup  
config date  
config environment  
config export  
config group  
config import  
config monitors  
config password  
config removejob  
config restrict  
config role  
config rule  
config ruleset  
config system authentication  
config system banner  
config system clear port  
config system clear securid  
config system clear slot  
config system email  
config system ip  
config system keypad  
config system ntp  
config system page-length  
config system properties  
config system protocols filter  
config system protocols ssh  
config system protocols telnet  
config system pulse  
config system serial  
config system snmp  
config system syslog-options  
config system timeout  
config user  
connect  
enable  
export  
history  
logout  
modem  
page-length  
ping  
port

powercontrol  
restart  
show alarms  
show all  
show config  
show dashboard  
show date  
show environment  
show events  
show group  
show install-history  
show log event  
show log system  
show monitors  
show ports  
show privileges  
show restrict  
show role  
show rule  
show ruleset  
show schedules  
show session  
show sessions  
show system authentication  
show system banner  
show system email  
show system ip  
show system keypad  
show system ntp  
show system page-length  
show system properties  
show system protocols  
show system pulse  
show system serial  
show system snmp  
show system syslog-options  
show system timeout  
show user  
show version  
show who  
shutdown  
suspend



# List of Commands Used in the Port Resources

?—valid for all  
assimilate—see command description for makes  
autorecovery—see command description for makes  
certify—see command description for makes  
clear counters—see command description for makes  
clear log—see command description for makes  
clear password—see command description for makes  
clear service-module—see command description for makes  
config authentication—see command description for makes  
config device logging—see command description for makes  
config info—valid for all  
config init—valid for all  
config log rule—valid for all  
config monitors—valid for all  
config properties—valid for all  
config protocols pass-through—see command description for makes  
config protocols shadow—see command description for makes  
config removejob—valid for all  
config schedule—see command description for makes  
config serial—valid for all  
config settings—see command description for makes  
config xbrowser—see command description for makes  
copy—see command description for makes  
device ping—see command description for makes  
exit—valid for all  
history—valid for all  
logout—valid for all  
ping—see command description for makes  
port—valid for all  
power—valid for all  
pull os—see command description for makes  
pull running-config—see command description for makes  
pull startup-config—see command description for makes  
pull tech—see command description for makes  
push os—see command description for makes  
push running-config—see command description for makes  
push startup-config—see command description for makes  
reboot—see command description for makes  
recover configuration—see command description for makes  
restore—see command description for makes  
rollback assimilate—see command description for makes  
rollback authentication—see command description for makes  
rollback config—see command description for makes

show alarms—valid for all  
show all—valid for all  
show authentication—valid for all  
show buffer—see command description for makes  
show dashboard—valid for all  
show device change—see command description for makes  
show device changes—see command description for makes  
show device logging—see command description for makes  
show device syslog—see command description for makes  
show diff—see command description for makes  
show directory—see command description for makes  
show events—valid for all  
show gps events—see command description for makes  
show gps position—see command description for makes  
show info—valid for all  
show interface—see command description for makes  
show log event—valid for all  
show log rule—valid for all  
show monitors—valid for all  
show pingstats—see command description for makes  
show post—see command description for makes  
show properties—valid for all  
show protocols pass-through—see command description for makes  
show protocols shadow—see command description for makes  
show rollback-config—see command description for makes  
show running-config—see command description for makes  
show schedules—see command description for makes  
show serial—valid for all  
show service-module—see command description for makes  
show settings—see command description for makes  
show startup-config—see command description for makes  
show status—see command description for makes  
show tech—see command description for makes  
show xbrowser—see command description for makes  
suspend—see command description for makes  
terminal—see command description for makes  
xbrowser—see command description for makes

# List of Commands Used in the Modem Resource

?  
config answer  
config info  
config init  
config log rule  
config monitors  
config ppp  
config properties  
config protocols pass-through  
config removejob  
config serial  
config vpn  
exit  
history  
logout  
port  
power  
ppp  
show alarms  
show all  
show answer  
show buffer  
show dashboard  
show events  
show info  
show log event  
show log rule  
show monitors  
show ppp  
show properties  
show protocols  
show serial  
show status  
show vpn  
suspend  
terminal

# List of Commands Used in the Powercontrol Resource

- ?
- config authentication
- config info
- config init
- config monitors
- config outlets
- config protocols pass-through
- config protocols shadow
- config serial
- exit
- history
- logout
- off
- on
- port
- power
- show alarms
- show all
- show authentication
- show buffer
- show dashboard
- show info
- show monitors
- show outlets
- show protocols
- show serial
- terminal

# Conventions Used in Command Descriptions

Commands are presented in the format displayed on this page.

## example command

Read a brief description of the command's purpose.

### Resource

All

### Syntax

`command <param1 | param2> [option <"name">]`

**"value"**—Quotation marks indicate strings to be supplied by the user. You do not need to enclose the value in quotes unless it contains a space. Example: `config group <"groupname">` shows that you must specify the name of the group that you want to edit or create.

**#**—Indicates a numeric value that you supply

`<param1 | param2 | "param3">`—Required valid parameters are enclosed in angle brackets and separated by the pipe `|` character. For example, `config system keypad <enable | disable>` shows that the `config system keypad` command must be followed by either `enable` or `disable`.

`[param]`—Optional parameters are enclosed in square brackets. Example: `show system ntp [verbose]` shows that you have the option of using the verbose parameter.

`{a..z}`—A range of possible alphanumeric values is enclosed in braces.

Example: `page-length <auto | {1..99}>` shows that you can either set the page length as `auto` to size automatically, or you can set it to any length from 1 to 99 lines.

### Usage

Read information concerning the command.

```
[admin@xyzcoWK01 (port1/1)]# example command
Example command successfully executed
```

**Main tab > Page > Sub-page**—The navigation path to the control that corresponds to this command; this may include a brief description.

### Related commands

List of other commands with similar functions, other commands that you may need to execute before you can execute this one, and commands that may return useful information related to this command

# About cron Format

Some CLI commands (**config schedule**, **config restrict**, and the **alert eligible** command within the **config user** editor) use a form of cron notation to specify times for repeating actions.

The cron format uses five fields to specify minute, hour, day of the month, month, and day of the week. The fields are separated by spaces. Each time parameter *restricts* execution to the specified value.



**Note:** Omitting a field does not set its value as null; a blank field is equivalent to using a wildcard.

If you do not want the command to execute once every minute, you will need to include a restriction on minutes to specify that the action takes place no more than once each hour. Similarly, if you do not want the command to execute hourly, include a restriction to specify the hour that the action takes place.

Each field takes one value or a range of values. Fields do not accept comma-separated values—for example, you cannot specify that an action takes place at minutes 15 and 45 of each hour. You can, however, specify a range of times such as 5:00 p.m. to 8:00 a.m. or Monday through Friday.

The **config schedule** command can also take other types of time parameter, so it uses letter prefixes to indicate what is being specified:

Time parameter	Prefix	Values	Example	Example behavior
Minute	-m	0-59	-m 15	Occurs at 15 minutes past the hour
Hour	-h	0-23	-h 6	Occurs at the specified minute(s) after 6:00 a.m. UTC
Day of the month	-D	1-31	-D 15	Occurs on the 15th day of the month
Month	-M	1-12	-M 3	Occurs in March
Day of the week	-W	0-6	-W 6-0 -W 0,6	Occurs on Saturday and Sunday only

Examples:

**config restrict reboot port1/2 -m "\*" \* \* \* 6-0"**—Restricts programmatic reboots of the device on port 1/2 to Saturdays and Sundays.

**[config user adent]# alert eligible \* 23-14 \* \* 1-5**—Allows the user adent to receive alerts any time from 23:00 to 14:00 UTC, Monday through Friday.

**config schedule -m 1 -h 0 -D15 reboot**—Reboots the device at minute 1, hour 0 (12:01 a.m.) UTC on the fifteenth day of the month. This occurs every month, because the month is not restricted; and it may occur on any day of the week, because the day of the week is not restricted.

**config schedule -m 1 -h 0 -W 0 reboot**—Reboots the device at minute 1, hour 0 (12:01 a.m.) UTC on day 0 of the week (Sunday). This occurs every Sunday, because neither the day of the month nor the month is restricted.

# Commands

---

## ?

Functions as a help command to display brief descriptions of commands available from the current resource, or parameters for a specified command.

### Resource

All

### Syntax

```
["command"] ?
```

Using ? after a command returns information about valid parameters for the command.

### Usage

```
[admin@A101100303]# ?  
RC Manager v3.4
```

config	Edit settings
connect	Connect to another RC Manager
enable	Re-authenticate as another user
history	Show command history
logout	Exit RC Manager
modem	Commands specific to modem
page-length	Configure page length
ping	Run the ping command
port	Commands specific to port
powercontrol	Commands specific to powercontrol
restart	Restart RC Manager
show	show system configuration
shutdown	Shutdown RC Manager
suspend	Suspend heartbeat and pulse processes

```
[admin@A101100303]# config ?  
RC Manager v3.4  
backup          Backup the current RC Manager settings and data  
date            Sets the system time of the RC Manager  
environment     Sets the system environmental thresholds  
export          Export RC Manager config to a file  
group           Configure Group  
import          Import RC Manager config from a file  
monitors        Monitor data wizard  
password        Change password  
removejob       Remove scheduled job  
restrict        Configure restrict details  
role            Create or update a security role  
rule            Configure rule details  
ruleset         Configure ruleset details  
system          Edit RC Manager settings  
update          Update the RC Manager installation  
user            Configure user
```

### Related commands

—

# assimilate

The **assimilate** command modifies the network device to work efficiently with the RC Manager. Changes vary by device, but include console speed, logging, and authentication.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, server, tcp

## Syntax

```
assimilate
```

## Usage

**assimilate** will make changes based on settings configured for this type of device. This command is automatically called during **config init** to optimize the RC Manager's interaction.

```
[admin@xyzcoWK01 (port1/1)]# assimilate
Setting buffered logging.
Setting configured speed to 19200.
Setting logging synchronous.
```

## Related commands

**rollback assimilate**

# autorecovery

The **autorecovery** command monitors console port activity and determines if the device is in an unresponsive state, cycling the power of the device to recover the device in the least amount of time. The time argument defines the amount of time the console must be unresponsive before the RC Manager cycles the power on the device.

This command checks for power control mappings and schedules an `intelligentReboot` job.

## Resource

port

## Makes for which this command is available

Cisco

## Syntax

```
autorecovery ["delay"]
["delay"] is in seconds.
```

## Usage

The **autorecovery** command requires power control to function. If there is no power outlet mapped to the device, **autorecovery** will not operate.

```
[admin@xyzcoWK01 (port1/1)]# autorecovery 120
Job was scheduled 9: [Interval: 00:02:00] intelligentReboot
```

## Related commands

—



# certify

The **certify** command saves the Alcatel device's configuration as the "certified" or known good configuration. If the device's configuration is changed in a harmful way later, you can return the device to the certified configuration using the **restore** command.

The **certify** and **restore** commands are only applicable to Alcatel devices.

## Resource

port

## Makes for which this command is available

Alcatel

## Syntax

```
certify
```

## Usage

```
certify
```

## Related commands

```
restore
```

# clear counters

Counters on a device usually increase over time and can mask potential problems if left to accumulate. The **clear counters** command clears all interface counters on the device. Rules can be defined to automate this operation using the clearCounters action.

## Resource

port

## Makes for which this command is available

Alcatel, Cisco, Juniper, Netscreen, TippingPoint

## Syntax

```
clear counters
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# clear counters  
Interface counters successfully cleared
```

## Related commands

```
clear log
```

# clear log

Logs on a device increase over time and can mask potential problems if left to accumulate. The **clear log** command clears all logs on the device.

## Resource

port

## Makes for which this command is available

Alcatel, Cisco, Juniper, ND Satcom, Netscreen, Nortel, Tasman, TippingPoint

## Syntax

```
clear log
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# clear log  
Log cleared
```

## Related commands

```
clear counters
```

# clear password

Clears the password on a device. Rules can be defined to automate this operation using the clearPassword action.

## Resource

port

## Makes for which this command is available

Juniper

## Syntax

```
clear password
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# clear password  
Password cleared
```

## Related commands

```
config authentication
```

# clear service-module

Resets the device's Telco interface and forces renegotiation. Rules can be defined to automate this operation using the clearServiceModule action.

## Resource

port

## Makes for which this command is available

Cisco

## Syntax

```
clear service-module <"interface name">  
"interface name" specifies the service module to be cleared.
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# clear service-module Serial0/1
```

## Related commands

—

# config answer

Opens an editor to configure modem behavior. The terminal type must be ANSI, and operates like the RC Manager's console port. The modem's default configuration is for North America.

## Resource

modem

## Syntax

```
config answer
```

## Subcommands

**show**—Display current settings.

**enable** and **disable**—Enable or disable the dial-in feature.

**init** <modem init string>—Edit the **init** string to add country code and other telco variables.



**Note:** To enable the modem to be used in Belgium, add the **AT+GCI=fd** variable to the **init** string.

To remove a setting, place the **no** modifier before it.

**[no] allow** <"phone number" | **all**>—Allow access from a specific calling phone number or from all numbers. The "phone number" string may be all or part of a phone number.

**[no] deny** <"phone number" | **all**>—Deny access to a specific calling phone number or from all numbers. The "phone number" string may be all or part of a phone number.

**[no] rings** <n>—Answer after the specified number of rings (2 by default).

**[no] ringback <n>**—Answers only when a number calls, hangs up, and redials within n seconds. The default is 30 seconds.

**[no] pulse**—Answer only when the pulse command has failed four consecutive times, applying all other defined restrictions as well.

**[no] suspend**—Disable SLV tests when PPP is enabled.

**[no] number <system phone number>** and **[no] domain <SMS domain name>**—These are both used in constructing the SMS email address that the management server uses when sending the `ppp on` message to establish contact with an RC Manager at a remote location.

**show**—Display current settings.

**exit**—Leave the modem configuration editor.

## Usage

By default, the on-board modem is not in auto-answer mode—all calls are denied.

Caller ID can be used to accept (**allow**) or refuse (**deny**) calls. Caller ID information is transmitted between the first and second rings. The **allow** and **deny** commands use whole prefix masking (for example, allowing all numbers within a specific area code, denying numbers beginning with a specified string of digits, or allowing specific numbers such as 4045551212). In the example below, calls from the phone number 2128675309 are allowed but all calls that begin with the string 512471 are blocked.

The following example shows a basic configuration:

```
[admin@xyzcoWK01 (modem)]# config answer
[config answer]# enable
[config answer]# init "" ATZ
[config answer]# allow all
[config answer]# exit
```

This example shows a more complex configuration:

```
[admin@xyzcoWK01 (modem)]# config answer
[config answer]# enable
[config answer]# rings 5
[config answer]# allow 2128675309
[config answer]# deny 512471
[config answer]# ringback 30
[config answer]# pulse
[config answer]# suspend
[config answer]# init "" ddd+++dddATS0=0&S1 OK AT+VCID=1 OK AT+GCI=fd
```



**Note:** Be sure to include the double quotes in the `init` string. This is one of the most common causes of modem issues.

## Related commands

`show answer`

# config authentication

Interactive command that steps you through the changes needed to update or set the credentials used to communicate with a network device. To set up authentication for the RC Manager, use the `config system authentication` command.

## Resource

port, powercontrol

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp, server, tcp

## Syntax

```
config authentication
```

## Usage

```
[admin@xyzcoWK01 (powercontrol)]# config auth
--- Existing Values ---

console user: tasman
console password: *****
enable user:
enable password:
Change these? (y/n) [n]: y
--- Enter New Values ---
console username: [tasman]:
console password [*****]:*****
confirm password:*****
enable username: []:
enable password []:
Would you like to test the supplied values? (y/n): y
Testing login will take a few moments...
Login successful; credentials are valid.
Saving credentials.
```

## Related commands

```
config init
config system authentication
show authentication
show system authentication
rollback authentication
clear password
```

# config backup

Back up the RC Manager. To view the information that will be backed up, use the `show config` command.

## Resource

system

## Syntax

```
config backup <scp | ftp> <"userId@IP:fileName">
```

## Usage



**Note:** The file size will likely exceed 20 megabytes. It will include current configuration and application data.

```
[admin@xyzcoWK01]# config backup scp joeuser@172.30.235.93:xyzcowk01.tar.gz
Password:*****
Creating package with current data.
Signing package.
Sending...
```

## Related commands

```
show config
config export
```

# config date

Interactive command to set the date and time on the RC Manager. Not used with the server. If a server is used, RC Managers use the server heartbeat to set the time unless a separate NTP server is used.

## Resource

system

## Syntax

```
config date
```

## Usage

To maintain accurate timestamps across time zones, use the current UTC time for this setting and rely on the user's time zone setting for offset.

```
[admin@xyzcoWK01]# config date
Displayed time is 01/16/2008 22:57:41 UTC
RC Manager time is 01/16/2008 22:57:41 UTC
Change these? (y/n) [n]:
```

## Related commands

```
show date
config system ntp
```

# config device logging

Interactive command to specify how logging is handled for the network device.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, server, tcp

## Syntax

```
config device logging
```

## Usage

This setting may alter the network device's configuration, based on the user's choices at the next assimilation process.

This setting does not remove current syslog configuration from network devices.

```
[admin@xyzcoWK01 (port1/1)]# config device logging
--- Existing Values ---
Set the console to use synchronous logging: yes
Set the console to use logging buffered: yes
Logging level for buffered logging (PIX only): 3
Device buffer polling interval: 30
Clear device log buffer on poll: no
Port syslog forwarding enabled: no
Change these? (y/n) [n]: y
Set the console to use synchronous logging: (y/n) [y]: y
Set the console to use logging buffered: (y/n) [y]: y
Logging level for buffered logging (PIX only): [3]:
Device buffer polling interval: [30]:
Clear device log buffer on poll: (y/n) [y]:
Enable syslog forwarding? (y/n) [n]: y
Syslog server IP: []: 172.30.235.244
Syslog port number: [514]:
Syslog facility: []: local1
```

## Related commands

```
assimilate
```

```
show device logging
```

# config environment

Interactive command to set the threshold for ambient temperature. The command also includes a humidity setting which is not applicable to this model.

## Resource

system

## Syntax

**config environment**

## Usage

Exceeding temperature and humidity thresholds will cause alarms. If environmental data is unavailable—for example, if the sensor has not been connected—corresponding alarms will not be generated.

```
[admin@xyzcoWK01]# config environment
--- Existing Values ---
Humidity Threshold: 85.0
Temperature Threshold: 95.0
Use Celsius: false
Change these? (y/n) [n]: y
--- Enter New Values ---
Humidity Threshold: [85.0]: 75
Temperature Threshold: [95.0]: 99
Use Celsius: (y/n) [n]: n
Do you want to commit these changes? (y/n): y
```

## Related commands

**show environment**

# config export

Exports the RC Manager's configuration to an external host. Using FTP or SCP, an XML representation of the RC Manager's configuration can be stored for future imports to other RC Managers. The XML file can be retrieved using the `config import` command.

You can use the `show config` command to view the information that will be exported.

## Resource

system

## Syntax

**config export** <scp | ftp> <"user@ipAddress:filename">

## Usage

```
[admin@xyzcoWK01]# config export FTP kjones@10.2.2.2:xyzcoWK01.xml
```

## Related commands

**config import**  
**config backup**  
**show config**



# config group

Opens an editor that allows you to create and delete group accounts, add and remove users to group accounts, and alter authority for group accounts.

## Resource

system

## Syntax

```
config group [no] <"groupname">
```

Use the **no** modifier to delete the group.

Account names must be unique. For example, if there is a user account called `sysadmin` on the RC Manager, you cannot create a group account called `sysadmin`.

## Subcommands

**description**—Information about the group. 255 alphanumeric characters.

**group**—An existing group that is to be included in this group.

**user**—A user to be associated with this group. Users can be added iteratively by repeating this command.

**email [in-band | out-of-band] [terse]**—Specify the email address that will receive administrative messages, optionally distinguishing between in-band and out-of-band email addresses. You can add more than one email address by repeating this command. The **terse** parameter is an optional setting to send only the subject line, which is useful for pagers. The email subcommand is only used to send group related mail—not alerts.

**system <"role">**—Authority for the RC Manager from defined roles. Authority is additive and multiple roles can be applied to a user by repeating the command.

**start**—Group's MMDDYYYYHHMMSS start time—INACTIVE before.

**expire**—Group's MMDDYYYYHHMMSS expiration time—INACTIVE after.

**modem <"role">**—Authority for the modem from defined roles. Authority is additive and multiple roles can be applied by repeating the command.

**port{1/1..n/n} <"role">**—Authority per port from defined roles. Authority is additive and multiple roles can be applied by repeating the command.

**powercontrol <"role">**—Authority for the power controller from defined roles. Authority is additive and multiple roles can be applied by repeating the command.

**show**—Display current settings.

**tacacs**—The TACACS ACL used to manage authorization for the group.

**no**—Used before optional commands to remove attributes or entries.

**exit**—Exit the group editor.

## Usage

```
[admin@xyzcoWK01]# config group no southwestOps
Group southwestOps deleted from RC Manager
```

```
[admin@xyzcoWK01]# config group auditors
Group auditors does not exist. Create (y/n): y
[config group auditors]# description auditors
[config group auditors]# email auditors@xyzco.us.com
[config group auditors]# expire 12312007235959
[config group auditors]# port 1/1 analyst
[config group auditors]# port 1/2 analyst
[config group auditors]# port 1/3 analyst
[config group auditors]# port 1/4 guest
[config group auditors]# exit
```

### Related commands

```
config user
show group
```

## config import

Imports an XML representation of the RC Manager's configuration from an external host using FTP or SCP. This replaces the configuration currently stored on the RC Manager. This process does not import the RC Manager's address and hostname information or scheduled jobs and monitors for any of the supported devices.

### Resource

system

### Syntax

```
config import <scp | ftp> <"user@ipAddress:filename">
```

### Usage

This command imports the XML document produced with the `config export` command.

Validation is performed on all fields before the imported values are committed. The imported configuration will be automatically rolled back if the import is unsuccessful.

Changes to a port's information will require the port to be reinitialized. The values will be present but must be individually accepted to assure proper communication with the device. Previously uninitialized ports do not require initialization since the new information is not replacing any current values.

Authorization changes to the `admin` role are ignored.

```
[admin@xyzcoWK01]# config import FTP kjones@10.2.2.2:xyzcoWK01.xml
```

### Related commands

```
config export
show config
```

# config info

Interactive command that steps you through the changes needed to update the RC Manager's settings used to communicate with the network device.

## Resource

port, powercontrol, modem

## Makes for which this command is available

All

## Syntax

```
config info
```

## Usage

The configuration choices presented depend on the device. The first word of the description will be used as the device's hostname, and will be displayed on the front panel as it scrolls information.



**Note:** Some symbol characters, such as the tilde ~ and reverse slant \ characters, are not shown correctly on the front panel display interface.

```
[admin@xyzcoWK01 (port1/1)]# config info
Hostname:
Description: tasman6300
Make: tasman
Model: 6300
OS: tios
OS Version:
Management IP:
DHCP Enabled: true
Dedicated Device IP: 169.254.100.2
Dedicated Port IP: 169.254.100.1
Dedicated Subnet: 255.255.255.252
Dedicated Speed/Duplex: auto:10half
Change these? (y/n) [n]: y
--- Enter New Values ---
description: [tasman6300]:
make: [tasman]:
model: [6300]:
os: [tios]:
os version: []:
management IP: []:
configure dedicated ethernet port? (y/n) [n]: y
Use DHCP? (y/n) [y]: n
Each RC Manager dedicated port IP address assignment must be on a different
network.
The device IP assignment and port IP assignment should be on the same
network for this port.
dedicated device IP [169.254.100.2]:
dedicated port IP [169.254.100.1]:
dedicated netmask: [255.255.255.252]:
speed/duplex: [auto]:
Do you want to commit these changes? (y/n):
```

**description** (optional)—Used to identify the device if no hostname is found.

**make** (required)—Type ? to see a list of supported devices. If your device is not listed, enter **native**.

**model** (optional)—Automatically discovered during assimilation of supported devices.

**os** (required in most cases)—Type `?` to see a list of supported OS types. This list is filtered based on the make.

**os version** (optional)—Automatically discovered during assimilation of supported devices.

**management IP**—Required if Ethernet-based functionality is desired. This is the regular IP address of the device and not related to the dedicated Ethernet between the RC Manager and the device.

**configure dedicated Ethernet port?**—Required if dedicated Ethernet functionality is desired. This network must be unique across all device ports on the RC Manager.

**dedicated device IP** (required)—IP address of the device's Ethernet interface.

**dedicated port IP** (required)—IP address of the port's Ethernet interface.

**dedicated netmask** (required)—Subnet mask for the dedicated Ethernet. Each port must be on its own subnet.

**speed/duplex** (optional)—Defaults to auto but can be changed to suit your network.

### Related commands

```
config init
show info
```

## config init

Interactive command that steps you through the initial configuration necessary for the RC Manager to communicate with the network device.

### Resource

`port`, `powercontrol`, `modem`

### Makes for which this command is available

All

### Syntax

```
config init
```

### Settings

The following settings are presented for the port resource.

**description** (optional)—Used to identify the device if no hostname is found. The first word of the description will be used as the device's hostname, and will be displayed on the front panel as it scrolls information.



**Note:** Some symbol characters, such as the tilde `~` and reverse slant `\` characters, are not shown correctly on the front panel display interface.

**make** (required)—Type `?` to see a list of supported devices. If your device is not listed, enter **native**.

**model** (optional)—Automatically discovered during assimilation of supported devices.

**os** (required in most cases)—Type ? to see a list of supported OS types. This list is filtered based on the make.

**os version** (optional)—Automatically discovered during assimilation of supported devices.

**management IP**—Required if you plan to implement Ethernet-based functionality. This is the regular IP address of the device and is not related to the dedicated Ethernet between the RC Manager and the device.

**configure dedicated Ethernet port?**—Required if you plan to implement dedicated Ethernet functionality. This network must be unique across all device ports on the RC Manager.

**dedicated device IP** (required)—IP address of the device's Ethernet interface.

**dedicated port IP** (required)—IP address of the port's Ethernet interface.

**dedicated netmask** (required)—Subnet mask for the dedicated Ethernet. Each port must be on its own subnet.

**speed/duplex** (optional)—Defaults to auto but can be changed to suit your network.

**console username**—Depends on the login process of the device.

**console password**—Depends on the login process of the device.

**enable username**—Depends on the enable process of the device.

**enable password**—Depends on the enable process of the device.

**Secondary Console username** (Cisco only—optional free text field)

**Secondary Console password** (Cisco only—optional free text field)

**Secondary Enable username** (Cisco only—optional free text field)

**Secondary Enable password** (Cisco only—optional free text field)

**serial bit rate** (required)—9600, by default.

**serial data bit** (required)—8, by default.

**serial parity** (required)—No parity, by default.

**serial stop bit** (required)—1, by default.

**use null modem?** (optional)—If the RC Manager cannot communicate with the device, try changing this value.

The settings that are presented depend on the resource and the specific device.

Typical setting prompts for the modem resource:

```
description: []:  
make: [embedded]:  
serial bit rate [38400]:  
serial data bit [8]:  
serial parity [none]:  
serial stop bit [1]:  
serial flow control [none]:
```

Typical setting prompts for the powercontrol resource:

```
description: []:  
make: []:  
model: []:  
os: []:  
os version: []:  
console username: []:  
console password []:  
serial bit rate [9600]:  
serial data bit [8]:  
serial parity [none]:  
serial stop bit [1]:  
serial flow control [none]:  
use null modem (rolled cable to device)? (y/n) [n]:  
Would you like to add a new mapping? (y/n) [n]:
```

Typical setting prompts for a port device that you have specified as a Cisco product using CatOS:

```
--- Enter New Values ---  
description: []:  
make: [native]: cisco  
model: []:  
os: []: catos  
os version: []:  
management IP: []:  
configure dedicated ethernet port? (y/n) [n]:  
console username: []:  
console password []:  
confirm password:  
enable username: []:  
enable password []:  
Warning: Speed below 9600 baud may impact performance.  
serial bit rate [9600]:  
serial data bit [8]:  
serial parity [none]:  
serial stop bit [1]:  
serial flow control [none]:  
use null modem (rolled cable to device)? (y/n) [n]:  
Do you want to commit these changes? (y/n):
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# config init  
--- Enter New Values ---  
description: []: tasman6300  
make: [native]: tasman  
model: []: 6300  
os: []: tios  
os version: []:  
management IP: []:  
configure dedicated ethernet port? (y/n) [n]:  
console username: []: tasman  
console password []: *****  
confirm password: *****  
enable username: []:  
enable password []:  
serial bit rate [9600]:  
serial data bit [8]:  
serial parity [none]:  
serial stop bit [1]:  
serial flow control [none]:
```

```
use null modem (rolled cable to device)? (y/n) [n]:
Do you want to commit these changes? (y/n): y
Testing login will take a few moments...
Login successful; credentials are valid.
Retrieving device information directly from device...
Hostname      : TASMAN-6300
Serial Number: 63000AISD0510009
Make         : tasman
Model        : 6300
OS Type      : TiOS
OS Version   : r6
Uptime       : 121:11:35
Updating OS version.
Assimilating the device will set buffered logging on the console.
Proceed? (y/n): y
Retrieving running-config from device via console...
Done.
- Output removed -
```

### Related commands

```
config info
config authentication
config serial
config outlets
```

## config log rule

Initializes the rule logging for a particular port. Once configured, a log will be created that displays the RC Manager's rule processing. Rule logging is automatically disabled when the RC Manager restarts.

This task places a significant drain on resources and should be used only for debugging rule execution.

### Resource

**modem, port**

### Makes for which this command is available

All

### Syntax

```
config log rule <enable | disable>
```

### Usage

```
[admin@xyzcoWK01 (port1/1)]# config log rule enable
```

### Related commands

```
show log rule
```

# config monitors

This command uses the scheduling system to collect data from device interfaces and orders rules applied against collected monitored data.

## Resource

All

## Makes for which this command is available

All

## Syntax

```
config monitors <"object"> <"instanceName"> ["ruleList"] [:"delay"]
```

objects may be:

- chassis (port resource)
- circuit (powercontrol resource)
- consoleLog (port resource)
- interface (port resource)
- modem (modem resource)
- ping (port resource)
- sms (modem resource)
- terminal (port resource)

The instanceName is used with the interface object; it specifies an interface on a network device.

Examples:

```
Ethernet0/0
```

```
FastEthernet0
```

```
Serial1
```

ruleList—Optional; accepts rules and rulesets. Separate rules and rulesets by commas and pipes (|).

"delay"—Specify a time, in seconds, between executions. The default time is 30 seconds.

## Usage

Data collection takes approximately 3 seconds per interface, so the maximum number of interfaces that can be reliably monitored at 30-second (default) intervals is 10. To increase the number of interfaces logged, increase the interval to allow at least 3 seconds for each interface.

Incorrect interfaces will respond with "% Invalid input detected at '^' marker." or "Bad argument encountered" and the monitor will remain unscheduled.

```
[admin@xyzcoWK01 (port1/1)]# config monitor interface Ethernet0/0
LinkAggrigation,defaultEthernetRule :45
Job was scheduled 14: [Interval: 00:00:45 Mask: * * * * *] showInterface
Ethernet0/0
```



To monitor whether the embedded modem has a good connection, use the built-in `modemLineDisconnected` rule:

```
[admin@xyzcoWK01 ]# modem
[admin@xyzcoWK01 (modem)]# config monitors modem modemLineDisconnected :30
Job was scheduled 0: [Interval: 00:00:30 Mask: * * * * *] rulesMonitor modem
embedded modemLineDisconnected 30
```

### Related commands

```
config rule
config ruleset
show monitors
config removejob
```

## config outlets

Interactive command to associate power outlets with the ports to which they provide power.

### Resource

```
powercontrol
```

### Syntax

```
config outlets
```

### Usage

```
[admin@xyzcoWK01 (powercontrol)]# config outlets
--- Existing Values ---
Change these? (y/n) [n]: y
--- Enter New Values ---
Would you like to add a new mapping? (y/n) [n]: y
Outlet:1
Interface:port1/1
Would you like to add a new mapping? (y/n) [n]: y
Outlet:4
Interface:port1/2
Would you like to add a new mapping? (y/n) [n]: n
Do you want to commit these changes? (y/n): y
[admin@xyzcoWK01 (powercontrol)]# show outlets
Outlet 1 goes to interface port1/1
Outlet 4 goes to interface port1/2
```

### Related commands

```
on
off
power
show outlets
```

## config password

Interactive command for changing account passwords. This allows an administrator to reset a user's password without knowing the previous password.

### Resource

```
system
```

## Syntax

```
config password ["username"]
```

## Usage

If you use the command `config password` without including a username, this allows you to change your own password. The `config password "username"` command allows you to change the password for the specified user account without supplying the current password. You must have the appropriate privilege to change another user's password.

```
[admin@xyzcoWK01]# config password
Old Password:*****
New Password [*****]: *****
Confirm Password: *****
Password changed.
[admin@xyzcoWK01]# config password tmcmillan
New Password: *****
Confirm Password: *****
Password changed.
```

## Related commands

—

# config ppp

Interactive command to configure the point-to-point (PPP) protocol server information.

## Resource

modem

## Syntax

```
config ppp
```

## Usage

```
[admin@xyzcoWK01]# config ppp
--- Existing Values ---
Phone Number:
User Name:
Password: *****
Use Static IP Address: false
Change these? (y/n) [n]: y
```

To use a hardware authenticator, set the password as `[PIN] $(SECURID)` where `[PIN]` is an optional password of up to 8 characters and the rest is entered exactly as shown. The password is case-sensitive.

## Related commands

```
show ppp
```

```
config system pulse
```

# config properties

Opens an editor that allows you to set name/value pairs for a device on one of the RC Manager's ports. These properties can be used by the management server to generate detailed reports. To set properties for the RC Manager, use the `config system properties` command.

## Resource

port, modem

## Makes for which this command is available

All

## Syntax

```
config properties
```

Within the editor, properties are defined as `<"propertyname"> <"value">`.

Properties may be deleted using the command `no <"propertyname">`.

Use the `exit` command to quit the editor.

## Usage

Properties are arbitrary pairs of names and values.

Examples:

- Room 312
- location floor4
- rack 6
- assetID 78652

```
[admin@xyzcoWK01 (port1/1)]# config properties
[config properties]# installDate 01/16/07
[config properties]# exit
[admin@xyzcoWK01 (port1/1)]#
```

## Related commands

```
config system properties
show properties
show system properties
```

# config protocols pass-through

Enables direct SSH connection to a device's console using TCP ports. Once configured, the end user or automated script can connect to the device's console port by SSH shell connection to a specific TCP port with all of the rollback, session logging, and authority protection available through the RC Manager's CLI.

## Resource

port, modem, powercontrol

### Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server

### Syntax

```
config protocols pass-through <enable | disable> <telnet | ssh> ["port number"]
```

Port number is optional but must be between 1025 and 9999.

If a port is not specified, the default of 2000 + port number will be used. For example, port 1/1 would be accessible on port 2001.

### Usage

This change takes effect when the RC Manager reboots.

```
[admin@xyzcoWK01 (port1/1)]# config protocols pass-through enable ssh
Pass-through port will be 2001.
SSH port change will take place after the next RC Manager restart.
```

### Related commands

```
show protocols pass-through
```

## config protocols shadow

Echoes all interaction with a device from its console port to a network port—for example, to allow a GPS device to stream location data to a listening application.

### Resource

port, powercontrol

### Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server

### Syntax

```
config protocols shadow
```

### Usage

```
[admin@xyzcoWK01 (port1/1)]# config protocols shadow
Enable: false
Using RC Manager management IP: 172.30.238.102
Port: 0
Change these? (y/n) [n]:
```

### Related commands

```
terminal
show protocols
```

# config removejob

Removes a job or monitor from the schedule.

## Resource

All

## Makes for which this command is available

All

## Syntax

```
config removejob <"jobID" | -all>
```

The **-all** option removes all jobs and monitors on the device.

## Usage

Use **show schedules** or **show monitors** to determine the job number before removing it.

```
[admin@xyzcoWK01 (port1/1)]# config removejob 14
Job 14 has been removed from the scheduler queue.
```

## Related commands

```
show schedules
show monitors
```

# config restrict

Restricts actions automatically called by rules to predefined thresholds. Each action can be restricted by port, minimum interval or an eligible time window. For example, a reboot may be called by a rule but be cancelled because a reboot has occurred within the past 3 hours. The reboot will not execute outside the cron-time mask, if one has been set.

## Resource

system

## Syntax

```
config restrict [no] <"actionName"> ["port"] [-i <#>] [-m <time>]
```

## Options:

**[no]**—Remove existing restrictions on this action.

**port#**—Restrict the action only on this port.

**-i**—Minimum interval in seconds before this action executes again.

**-m <time>**—Specifies when the action may execute, in cron format. For example, **\*\*\*\* 6-0** restricts the specified action to occur only on Saturdays (day 6) and Sundays (day 0).

For information about using cron format, see “About cron Format” on page 28.

## Action names:

**alarm**

**showTech**—Issues 'show tech' against the device

**cycleInterface**—Cycles the interface specified

**deviceInfo**—Collects Serial#/Make/Model/OS information

**writeMemory**—Saves running config to flash card

**clearCounters**—Clears all interface counters

**reboot**—Reboots the device connected to this port

**assimilate**—Assimilates a device according to preferences

**powerCycle**—Cycles power to a device

**powerOff**—Removes power to a device

**powerOn**—Restores power to a device

**pushOS**—Pushes an OS image to a device

**pushConfig**—Pushes a running or startup config to a device

**pullConfig**—Pulls a running or startup config from a device

**pullOS**—Pulls an OS image from a device

**restartSystem**—Restarts the RC Manager

## Usage

The event action inside a rule can override restrictions with an optional force flag.

This example restricts cycling power to no more than every 3 hours. The **-i** interval parameter is given in seconds.

```
[admin@xyzcoWK01]# config restrict powerCycle -i 10800
```

This example restricts rebooting port 1/4 except on weekends:

```
[admin@A101100303]# config restrict reboot port1/4 -m "*" * * * 0,6"
```

## Related commands

```
config rule  
show restrict
```

# config role

Opens an editor to define a set of privileges to apply to users and groups. Roles specify permitted commands.

The industry standard `admin`, `security`, `analyst`, `operator`, and `guest` roles are predefined but can be customized with this command, or you can create new roles.

## Resource

`system`

## Syntax

```
config role [no] <"role name">
```

Include the **no** modifier to delete the role.

## Subcommands

Use the **no** modifier to remove settings. For example, use **no expire** to define the role to be valid indefinitely, if it previously had an expire date.

**[no] allow <command | ?>**—Specify commands that accounts with this role may execute. You may use **\*** as a wildcard character. The command **allow ?** displays a list of allowed commands for this role.

**[no] deny <command | ?>**—Specify commands that accounts with this role may not execute. You may use **\*** as a wildcard character. The command **deny ?** displays a list of commands denied to this role. Specifically denied commands are filtered from those specifically allowed. The **all** keyword is overridden by any specific **allow** or **deny** statement. For example, if you issue the **deny show \*** command after allowing the **show user** command, the role allows **show user** but no other **show** commands.

**[no] description <"text">**—Provide information about the role. This is a free text field of 255 characters.

**[no] expire <MMDD>**—Month and day of the current year after which the role is no longer valid.

**[no] start <MMDD>**—Month and day of the current year that the role becomes valid.

## Usage

Use the **?** command after the **allow** and **deny** keywords to display a list of privileges.

A user or group may be given more than one role. The current privileges are evaluated for each execution, and may change authority during a user's session.

The example below shows a role that starts on January 01 and expires on December 31 of the current year.

```
[admin@xyzcoWK01]# config role EastNOC
[config role EastNOC] description East Coast NOC
[config role EastNOC] start 0101
[config role EastNOC] expire 1231
[config role EastNOC] allow show*
[config role EastNOC] deny show user, session
[config role EastNOC] allow config password, ppp-*
[config role EastNOC] allow export
```

## Related commands

```
show role
```

# config rule

Opens an editor that allows you to create rules to be applied to monitors and to initiate alerting and action.

## Resource

system

## Syntax

```
config rule [no] <"rulename">
```

Using the **no** modifier with the **config rule** command deletes the rule.

## Subcommands

**no**—Used before subcommands to remove attributes or entries.

**conditions**—List of elements evaluated from collected data and evaluated using thresholds to determine if rule is true.

**description**—Provide information about the rule. This is a free text field of 255 characters. Use the **no** modifier to clear an existing description.

**start**—The rule's MMDDYYYYHHMMSS start time—INACTIVE before this date and time.

**expire**—The rule's MMDDYYYYHHMMSS expiration time—INACTIVE after this date and time.

**show**—Display current settings.

**action <action name> <parameters>**—May be any of the following:

- **alarm** [alarmType] [noalert | -a message | -oid id]
- **certify**
- **clearCounters**
- **clearServiceModule** [-i interfaceName]
- **clearValue** [system | monitor] variable\_name
- **decrementValue** [system | monitor] variable\_name
- **emailSystemLog** [email address]
- **event** [alarmType] [-a message]
- **execute** [-raw] [-pattern pattern] [-multiline] [-command command] [-timeout timeout] [-setValue [system | monitor] variable\_name value]
- **incrementValue** [system | monitor] variable\_name
- **interfaceCycle** [-i interfaceName]
- **interfaceOff** [-i interfaceName]
- **interfaceOn** [-i interfaceName]
- **powerCycle** [delay seconds]
- **powerOff**
- **powerOn**
- **pppOff**
- **pppOn**
- **pullRunningConfig**



- `pullStartupConfig`
- `pushOS` [`candidate` | `current` | `previous`]
- `pushRunningConfig` [`candidate` | `current` | `previous`]
- `pushStartupConfig` [`candidate` | `current` | `previous`]
- `reboot`
- `rebootAll`
- `rebootWorking`
- `restartSystem`
- `restore`
- `serviceProcessorPowerCycle`
- `serviceProcessorPowerOff`
- `serviceProcessorPowerOn`
- `setPosition`
- `setValue` [`system` | `monitor`] `variable_name` `value`
- `showTech`
- `writeStatus` [`a status message`]

Actions are executed in the order they are listed in the rule.

**exit**—Leave the rule configuration editor.

### Usage

```
[admin@xyzcoWK01]# config rule carrier
[config rule carrier]# show
description Serial Carrier Problems
action alarm -a "serial carrier problems"
conditions
interface.operationalStatus equals up AND
interface.lineProtocolStatus equals down AND
serviceModule.currentLossOfFrame equals true AND
serviceModule.currentLossOfSignal equals true
exit
exit
```

### Related commands

```
config ruleset
config monitors
show rule
```

# config ruleset

Orders rules or rulesets to apply to monitors.

## Resource

system

## Syntax

```
config ruleset [no] <"ruleset name">
```

Using the **no** modifier with the **config ruleset** command deletes the rule set.

## Subcommands

**description**—Provide information about the rule set. This is a free text field of 255 characters.

**show**—Display the rule set's current settings.

**rules**—A list of rules applied either in series or in parallel. Rules separated by the pipe | character are evaluated in parallel. Rules separated by commas are evaluated sequentially; evaluation stops at the first match.

## Usage

Example 1:

```
[admin@xyzcoWK01]# config ruleset interfaceDefault
description Default Ethernet Ruleset
rules
lossOfSignalIncrements | lossOfFrameIncrements | aisAlarmIncrements |
remoteAlarmIncrements | currentLineCodeViolationsIncrements |
currentPathCodeViolationsIncrements | currentFrameLossSecondsIncrements |
currentLineErrorSecondsIncrements | currentErroredSecondsIncrements |
operationalStatusDown | lineProtocolStatusDown | loadGreaterThan90 |
reliabilityLessThan90 | dataCarrierDetectIsDown | dataSetReadyIsDown |
dataTerminalReadyIsDown | requestToSendIsDown | clearToSendIsDown |
outputQueueDropsRate | intputQueueDropsRate | intputRuntsRate |
intputGiantsRate | inputThrottlesRate | inputCrcErrorsRate |
inputFrameErrorsIncrements | inputOverrunErrorsIncrements |
outputLateCollisionsIncrements | inputIgnoredPacketsIncrements |
inputAbortedPacketsIncrements | outputCollisionsRate |
outputInterfaceResetsIncrements | outputDeferredIncrements |
outputNoCarrierIncrements | outputCarrierTransitionsIncrements
```

Example 2:

```
[config ruleset rulesetOne]# rule1, rule2 |rule 3, rule 4
```

Rule 1 will be evaluated, and if it does not match, rule 2 and rule 3 will both be evaluated. If neither rule 2 or 3 match, rule 4 is evaluated.

## Related commands

```
config rule
config monitors
show ruleset
```

# config schedule

Schedules jobs to execute automatically. Choose from available jobs listed in the help text when using the `config schedule` command.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp, server, tcp

## Syntax

```
config schedule <time> <"jobname" ["jobargs"]>
```

**time** can be of one of the following formats:

- Calendar-based using cron notation:  
`<[-m 0-59] [-h 0-23] [-D 1-31] [-M 1-12] [-W 0-6]> [-d delay]`  
`-m {0..59}`—Minute range  
`-h {0..23}`—Hour range  
`-D {1..31}`—Day of the month  
`-M {1..12}`—Month range  
`-W {0..6}`—Day of the week; 0 is Sunday  
`-d <"delay">`—Delay in seconds between two consecutive executions of the job

For information about using cron format, see “About cron Format” on page 28.

- Interval-based:  
`[-s startTime] [-e endTime] <-d delay>`  
`-d <"delay">`—Delay in seconds between two consecutive executions of the job  
`-e <end time>`—End time after which the job is removed from the scheduler  
`-s <start time>`—Start time for the job
- One time:  
`-o <one time>`—the one time at which the job should run.

Values for `<start time>`, `<end time>`, and `<one time>` are in `MM/dd/yy-hh:mm:ss` format.

**jobname**—The command to run, followed by its arguments. Job names require no spaces and use special names. The jobs that can be scheduled depend on the device. The following jobs are defined:

- **assimilate**—Assimilate a device.
- **certify**—Copies working directory contents to be certified.
- **deviceInfo**—Collects device serial number, make, model, and OS information.
- **interfaceCycle**—Cycles the interface specified.
- **interfaceOff**—Turns off the interface specified.
- **interfaceOn**—Turns on the interface specified.

- **pppOff**—Turn off PPP.
- **pppOn**—Turn on PPP.
- **writememory**—Saves running config.
- **clearCounters**—Clears all interface counters.
- **clearServiceModule**—Clears the service module.
- **reboot**—Reboot the device connected to this port.
- **rebootAll**—Reboot the stack to which this device belongs.
- **rebootWorking**—Reboot the device from the working configuration.
- **pullOS**—Copies an OS image from the device to the RC Manager.
- **pullRunningConfig**—Copies a running config file from the specified device to the RC Manager.
- **pullStartupConfig**—Copies a startup config file from the specified device to the RC Manager.
- **pushOS**—Pushes an OS image to the specified device.
- **pushRunningConfig**—Pushes a running config file to the specified device.
- **pushStartupConfig**—Pushes a startup config file to the specified device.
- **recoverPassword**—Forces restoration of the last known startup configuration.
- **restore**—Copies certified directory contents to the device.
- **showTech**—Collects tech support information from the specified device.

## Usage

```
[admin@xyzcoWK01 (port1/1)]# config schedule -o 10/03/07-10:30:00 pushOS
candidate
```

executes push os <candidate> on Oct 3, 2007 at 10:30.

```
[admin@xyzcoWK01 (port1/1)]# config schedule -M 3 -m 30 clearCounters
```

executes clear counters every half hour in March.

## Related commands

```
config removejob
show schedules
```

# config serial

Interactive command to specify serial console connection settings for a network device. To configure the RC Manager's management console port, use the **config system serial** command.

## Resource

modem, port, powercontrol

## Makes for which this command is available

All

## Syntax

**config serial**

This command is available from terminal pass-through as `~s`

## Usage

The option to test the new settings is presented before the commit dialog.

The test option is not presented if called using `~s`.

The `Use null modem` option allows you to use a crossover cable if one was supplied with your network device. The RC Manager (by default) uses a straight-through cable for console access.

```
[admin@xyzcoWK01 (port1/1)]# config serial
Serial Bit Rate: 9,600
Serial Data Bit: 8
Serial Parity: none
Serial Stop Bit: 1
Serial Flow Control: none
Null modem: false
DSR: false
CTS: false
RX : 6,790,929
TX : 248,800
Overrun Errors: 0
Change these? (y/n) [n]: y
--- Enter New Values ---
serial bit rate [9600]:
serial data bit [8]:
serial parity [none]:
serial stop bit [1]:
serial flow control [none]:
use null modem (rolled cable to device)? (y/n) [n]: y
Do you want to commit these changes? (y/n):
```

## Related commands

```
config system serial
show serial
show system serial
```

# config settings

Opens an editor to set the default options that the RC Manager uses to interact with the device.

## Resource

modem, port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server, tcp

## Syntax

**config settings**

## Usage

```
[admin@xyzcoWK01 (port1/1)]# config settings
--- Preferences Menu ---
1 Assimilated terminal speed: 9,600
2 Modify terminal serial speed on assimilation: false
3 Device configuration pull method: console
4 Device configuration push method: xmodem
5 Alternative device configuration push method: tftp
6 Device configuration push retries: 3
7 Automatic configuration rollback: [disabled/manual/automatic] automatic
8 Count delay before automatic configuration rollback: 75
9 Issue 'write memory' after configuration rollback: true
10 Verify OS upgrade: true
11 Use manual boot during upgrade, if applicable: true
12 OS image push method: tftp
13 Alternative OS image push method: xmodem
14 Attempt to use XModem-1K (first attempt only): true
15 Save Configuration on change before reboot? true
16 Reset console and telnet on auth. change? true
17 Previous OS image not found, continue? true
18 Maximum OS image push retry attempts: 3
19 Device reboot timeout (seconds): 300
20 Force the device to reboot immediately after pushing the OS: true
21 Device pass through timeout(seconds): 300
22 Done
Select preference to edit or 22 to end:
```

## Related commands

**show settings**

# config system authentication

Interactive command to delegate authentication to external TACACS or RADIUS hosts, or to modify password standards and account lockout for local authentication. To set up authentication for devices connected to the RC Manager, use the **config authentication** command.

## Resource

system

## Syntax

**config system authentication**

## Usage

Local authentication is updated from TACACS or RADIUS if configured.

If multiple servers are configured and available, the first definitive response is used. An incorrect shared secret responds as invalid authentication.

The RC Manager does not support challenge-response dialogues.

MSCHAP authentication is only available to Microsoft® Windows-based TACACS servers. Account lockout values are only used for local failover if TACACS or RADIUS authentication is selected.

If maximum logins are reached for each user, a message with the stations that are currently logging in will be presented.

```
[admin@xyzcoWK01]# config system authentication
--- Existing Values ---
Authentication type: local
Use strong passwords: false
Expire password: false
Limit maximum concurrent sessions: false
Number of invalid attempts before lockout: 0
Change these? (y/n) [n]: y
--- Enter New Values ---
Authentication type: [local]: tacacs
Use strong passwords: (y/n) [n]: y
    Require mixed case: (y/n) [n]: y
    Require numbers and punctuation: (y/n) [n]: y
    Reject variation of login id: (y/n) [n]: y
    Reject word in dictionary: (y/n) [n]:
    Reject sequences in numbers or letters (qwerty): (y/n) [n]:
    Reject previous password: (y/n) [n]: y
        Number of previous passwords to check [1 to 20]: [0]: 5
    Reject single character difference from previous password: (y/n) [n]: y
    Enforce minimum password length: (y/n) [n]: y
        Minimum password length: [0]: 8
Expire password: (y/n) [n]: y
    Number of valid days: [0]: 45
Limit maximum concurrent sessions: (y/n) [n]:
Number of invalid attempts before lockout: [0]: 3
Lockout duration in minutes: [0]: 15
Authentication method: [pap]:
Accounting type: [none]: stop-only
Use TACACS Authorization: (y/n) [n]: y
Cache TACACS ACLs: (y/n) [n]: y
Cache passwords: (y/n) [n]: y
Create users: (y/n) [n]: y
If server is down, should system use local authentication: (y/n) [n]: y
First host IP: 192.168.1.100
First shared secret: *****
Confirm shared secret: *****
First authorization port: [0]: 49
Second host IP: []:
Do you want to commit these changes? (y/n):
```

### Related commands

```
show system authentication
config authentication
show authentication
```

## config system banner

Opens an editor that allows you to define banner text to display before or after login.

### Resource

system

## Syntax

```
config system banner <login | welcome>
```

## Usage

The login banner is displayed to users prior to logging in. Some SSH clients do not support displaying a login banner prior to authenticating.

The welcome banner is presented after login.

Use **exit** on a line by itself to leave the editor.

```
[admin@xyzcoWK01]# config system banner login
Type 'exit' on a line by itself to exit
[config system banner login]# unit xyzcoWK01
[config system banner login]# exit
```

```
[admin@xyzcoWK01]# config system banner welcome
Type 'exit' on a line by itself to exit
[config system banner welcome]# Successfully logged in to unit xyzcoWK01
[config system banner welcome]# exit
```

## Related commands

```
show system banner
```

# config system clear port

When you disconnect a device from a port, its configuration information remains stored on the RC Manager until it is explicitly cleared. The **config system clear port** command removes a previously configured device from the ports database.

## Resource

system

## Syntax

```
config system clear port <slot/port>
```

You can use the wildcard character **\*** to clear all ports on the option card.

## Usage

```
[admin@xyzcoWK01]# config system clear port 2/3
Clearing port 2/3 will delete all associated data.
Continue? (y/n): y
port2/3 cleared
```

```
[admin@xyzcoWK01]# config system clear port 1/*
Clearing port 1/* will delete all associated data.
Continue? (y/n): y
port1/1 cleared
port1/2 cleared
port1/3 cleared
port1/4 cleared
port1/5 cleared
port1/6 cleared
port1/7 cleared
port1/8 cleared
```



```
port1/9 cleared
port1/10 cleared
port1/11 cleared
port1/12 cleared
port1/13 cleared
port1/14 cleared
port1/15 cleared
port1/16 cleared
```

#### Related commands

```
config system clear slot
```

## config system clear slot

This command is used to remove a previously configured option card from the database. Use this command if you install or exchange an option card.

When the hardware is removed, the slot must be cleared from the database with this command before a replacement can be recognized.

#### Resource

```
system
```

#### Syntax

```
config system clear slot <1 | 2>
```

#### Usage

```
[admin@xyzcoWK01]# config system clear slot 2
```

#### Related commands

```
config system clear port
```

## config system clear securid

This command clears the RC Manager-level alarm that is normally generated when an RSA SecurID hardware authenticator is removed from the RC Manager.

This command does not silence the port-level alarm that is generated when the hardware authenticator is removed and the connected device is then unable to authenticate. To silence the port-level alarm:

- Plug the hardware authenticator back into the USB connector
- Suspend the port (this silences the alarm temporarily but does not address the cause)
- Set the port to authenticate by some other means than hardware authentication

#### Resource

```
system
```

#### Syntax

```
config system clear securid
```

#### Usage

```
[admin@xyzcoWK01]# config system clear securid
```

Rsa SecurID alarm cleared

### Related commands

—

## config system email

Interactive command to configure SMTP server settings for sending in-band and out-of-band mail alerts. When alarms are detected, the RC Manager collects them and sends them every two minutes to users who have subscribed to the alarms.

### Resource

system

### Syntax

**config system email**

### Usage

For maximum fault tolerance, use separate mail servers when operating out-of-band.

```
[admin@xyzcoWK01]# config system email
--- Existing Values ---
In band SMTP Server IP Address: 127.0.0.1
In band FROM address: system@127.0.0.1
In band SMTP Port: 25
Use user authentication in band: no
Out of band SMTP Server IP Address: 127.0.0.1
Out of band FROM address: system@127.0.0.1
Out of band SMTP Port: 25
Use user authentication out of band: no
Change these? (y/n) [n]: y
```

### Related commands

**show system email**

# config system ip

Interactive command to set the management Ethernet address and hostname of the RC Manager.

## Resource

system

## Syntax

**config system ip**

## Usage

Changes to these parameters take place when you commit them, and may cause your connection to fail.



**Note:** If DNS is enabled and the DNS server becomes unavailable, all features configured to use hostnames will fail.

```
[admin@A101100303]# config system ip
--- Existing Values ---
Use DHCP: Yes
Management IP: 172.30.151.8
Host Name: A101100303
Subnet Mask: 255.255.255.0
Broadcast Address: 172.30.151.255
Default Route: 172.30.151.254
Speed/duplex: auto:100full
DNS Server:
MAC Address: 00:0F:2C:00:02:BF
Change these? (y/n) [n]: y
--- Enter New Values ---
Use DHCP: (y/n) [y]: n
Management IP: [172.30.151.8]: 172.30.151.109
Host Name: [A101100303]:
Subnet Mask: [255.255.255.0]:
Default Route: [172.30.151.254]:
speed/duplex: [auto:100full]:
DNS Server IP: []:
Warning: Remote connections may be lost if you commit changes.
Do you want to commit these changes? (y/n): y
```

## Related commands

**show system ip**

# config system keypad

Enables or disables the keypad on the front panel. This change does not prevent users from shutting down or restarting the RC Manager from the keypad. By default, the keypad is enabled.

## Resource

system

## Syntax

```
config system keypad <enable | disable>
```

## Usage

```
[admin@xyzcoWK01]# config system key disable
Keypad Configuration: disabled
[admin@xyzcoWK01]# config system key enable
Keypad Configuration: enabled
```

## Related commands

```
show system keypad
```

# config system ntp

Interactive command to enable NTP and direct Network Time Protocol requests to a time server, if the RC Manager is not configured to collect NTP from the management server.

## Resource

system

## Syntax

```
config system ntp
```

## Usage

If NTP is disabled, the internal clock will be used to set the RC Manager time. If a server is configured, but NTP is disabled, the RC Manager will use the server heartbeat to set the time.

The RC Manager does not provide NTP synchronization services to other devices.

```
[admin@xyzcoWK01]# config system ntp
--- Existing Values ---
Use NTP: yes
NTP Primary Server Hostname or IP: 172.30.238.20
NTP Secondary Server Hostname or IP: null
Change these? (y/n) [n]: y
--- Enter New Values ---
Use NTP: (y/n) [y]:
NTP Primary Server Hostname or IP: [172.30.238.20]:
NTP Secondary Server Hostname or IP: []: 172.30.237.16
Do you want to commit these changes? (y/n): y
```

## Related commands

```
show system ntp
config date
```

# config system page-length

Interactive command to set the number of lines displayed in the CLI window before you are prompted to scroll the display. The auto parameter will attempt to determine the screen geometry if provided by the client. If Auto is selected and the client does not supply the value, the default is 24 lines.

## Resource

system

## Syntax

```
config system page-length
```

## Usage

```
[admin@xyzcoWK01]# config system page-length
Page length preference is auto.
Change this? (y/n) [n]: y
Page length preference (2 or more lines or auto): 30
```

## Related commands

```
page-length
show system page-length
```

# config system properties

Opens an editor that allows you to set name/value pairs for an RC Manager. These properties can be used by the management server to generate detailed reports. To set properties for the devices connected to the RC Manager, use the `config properties` command.

## Resource

system

## Syntax

```
config system properties
```

Within the editor, properties are defined as `<"propertyname"> <"value">`.

Properties may be deleted using the command `no <"propertyname">`.

Use the `exit` command to quit the editor.

## Usage

Properties are arbitrary pairs of names and values. For example:

- Room 312
- location floor4
- assetID 78652

```
[admin@xyzcoWK01]# config system properties
[config system properties]# installDate 11/10/06
[config system properties]# exit
[admin@xyzcoWK01]#
```

## Related commands

```
show system properties
config properties
show properties
```

# config system protocols dhcp

Allows you to set a DHCP base address that the RC Manager uses in assigning DHCP addresses to connected devices. Port devices may be configured to acquire DHCP addresses from the RC Manager as a part of the `config init` dialog.

## Resource

`system`

## Syntax

```
config system protocols dhcp <base>
```

## Usage

The base parameter is the base address to be used in generating DHCP addresses for connected devices.

```
config system protocols dhcp 169.254.100
```

## Related commands

```
show system protocols
```

# config system protocols filter

Opens an editor that allows you to filter management IP connectivity to the RC Manager. Using source IP address as a parameter, the RC Manager specifically allows or denies listed IP address/subnet mask combinations.

## Resource

system

## Syntax

```
config system protocols filter
```

## Subcommands

```
[no] allow ["ip address/subnet mask"]  
[no] deny ["ip address/subnet mask"]  
show  
exit
```

## Usage

The initial filter is `allow all`.

Once filtering is implemented, all managed device IP addresses must be specified in `config info` for each port to allow TFTP/FTP traffic to the RC Manager.

Subnet mask bits can be entered in either decimal (/27) or dotted-decimal (255.255.255.252).

Changes affect new connections to the RC Manager. Changes are applied when you exit the editor.

Improper subnet boundaries will be corrected automatically to the closest complete range.

Specifically denied addresses are filtered from those specifically allowed. The `all` keyword is overridden by any specific `allow` or `deny` statement. If you issue the `deny all` command after allowing an address, that address remains allowed. In the example below, all addresses that have not been explicitly allowed will be denied.

```
[admin@xyzcoWK01]# config system protocols filter  
[config system protocols filter]# allow 172.16.100.80/28  
[config system protocols filter]# deny all  
[config system protocols filter]# exit  
[admin@xyzcoWK01]#
```

## Related commands

```
show system protocols
```

## config system protocols ssh

Configures the RC Manager to listen to SSH requests on a TCP port other than the default port 22.

### Resource

system

### Syntax

```
config system protocols ssh <22 | {1024..10000}>
```

### Usage

This change requires a reboot of the RC Manager to take effect.

```
[admin@xyzcoWK01]# config system protocols ssh 9000  
SSH port change will take place after the next RC Manager restart.
```

### Related commands

```
show system protocols
```

## config system protocols telnet

Configures the RC Manager to respond to Telnet requests on TCP port 23.

### Resource

system

### Syntax

```
config system protocols telnet <enable | disable>
```

### Usage

This change requires a reboot of the RC Manager to take effect.

```
[admin@xyzcoWK01]# config system protocols telnet enable  
Telnet will be enabled after the next RC Manager restart.
```

### Related commands

```
show system protocols
```

## config system pulse

Interactive command to set up pulse server use. The pulse address is a server running the echo port (TCP port 7 by default) and is used to determine network availability and operation. This command allows you to configure the RC Manager to use out-of-band dial-up when the pulse fails.

### Resource

system

### Syntax

```
config system pulse
```



## Usage

Choose a pulse host on a network that defines operational minimum for the connected network devices.



**Note:** The Cisco IOS **TCP small server** service cannot be used to respond to echo requests from the RC Manager.

If the pulse fails four successive requests, this triggers out-of-band connectivity. After the out-of-band connection is established, the pulse must pass five successive requests to drop out-of-band connectivity. Pulse generates an alarm on its first failure.

```
[admin@xyzcoWK01]# config system pulse
--- Existing Values ---
Use Pulse: false
Pulse Server IP: 127.0.0.1
Pulse Server Port: 7
Dial Out when pulse fails: no
Change these? (y/n) [n]: y
--- Enter New Values ---
Enable ppp to dial out on pulse failure: (y/n) [n]: y
Use Pulse: (y/n) [n]: y
Pulse IP: [127.0.0.1]: 172.30.235.1
Pulse Port: [7]:
Do you want to commit these changes? (y/n): y
```

### Related commands

```
show system pulse
config ppp
```

## config system serial

Interactive command to specify the RC Manager's console port settings. To configure the console port for a device connected to the RC Manager, use the **config serial** command.

### Resource

```
system
```

### Syntax

```
config system serial
```

### Usage

Changing the serial settings may stop communication with an external modem connected to the RC Manager's console port. Be sure to read the configuration guide for your modem for important information.

```
[admin@xyzcoWK01]# config system serial
--- Existing Values ---
Null modem: no
Change these? (y/n) [n]: y
Enable null modem? (y/n) [n]: y
Do you want to commit these changes? (y/n): y
```

### Related commands

```
show system serial
config serial
show serial
```

# config system snmp

Interactive command to activate or deactivate basic SNMP settings. SNMP may be disabled, or set to one of the following security levels:

**noAuthNoPriv** security requires that the user connects with the SNMP username, but does no message validation or encryption.

**authNoPriv** security requires that the user connect with the SNMP username, and makes sure that the message is valid by using the specified auth password.

**authPriv** security requires that the user connect with the SNMP username, that it has been signed with the Auth password, and that it has been encrypted with the Priv password.

## Resource

system

## Syntax

```
config system snmp
```

## Usage

```
[admin@xyzcoWK01]# config system snmp
--- Existing Values ---
SNMP is disabled.
Change these? (y/n) [n]: y
--- Enter New Values ---
Security Level (authPriv,authNoPriv,noAuthNoPriv,disabled): [disabled]:
authPriv
Port: [161]:
Username: xyzcoWK01
Auth Protocol: [SHA]:
Auth Password: *****
Confirm Auth Password: *****
Priv Protocol: [AES256]:
Priv Password: *****
Confirm Priv Password: *****
Do you want to commit these changes? (y/n): y
Auth protocol may be set to SHA (default) or MD5. Priv protocol may be set to AES256
(default), AES192, AES128, or DES.
```

You will only be prompted for the applicable passwords.



**Note:** You can set appropriate values for `sysContact.0` and `sysLocation.0` with the `config system properties` command.

To disable SNMP, set the security level to **disabled**.

```
[admin@A101100303]# config system snmp
--- Existing Values ---
Security Level: authPriv
Port: 161
Username: xyzcoWK01
Auth Protocol: SHA
Auth Password: *****
Priv Protocol: AES256
Priv Password: *****
Change these? (y/n) [n]: y
```

```
--- Enter New Values ---
Security Level (authPriv,authNoPriv,noAuthNoPriv,disabled): [authPriv]:
disabled
Do you want to commit these changes? (y/n): y
```

#### Related commands

```
show system snmp
```

## config system syslog-options

Interactive command to specify the details for forwarding the RC Manager's logs to a Syslog server.

#### Resource

```
system
```

#### Syntax

```
config system syslog-options
```

#### Usage

```
[admin@xyzcoWK01]# config system syslog-options
--- Existing Values ---
Syslog enabled: no
Syslog server IP:
Syslog port number: 514
Syslog facility:
Change these? (y/n) [n]: y
--- Enter New Values ---
Enable syslog? (y/n) [n]: y
Syslog server IP: []: 172.30.235.91
Syslog port number: [514]:
Syslog facility: []: local5
Do you want to commit these changes? (y/n): y
```

#### Related commands

```
show system syslog-options
```

## config system timeout

Interactive command to change the SSH session time-out. If not configured, sessions time out after five minutes of inactivity.

#### Resource

```
system
```

#### Syntax

```
config system timeout
```

#### Usage

```
[admin@xyzcoWK01]# config system timeout
Current session timeout is 5 minutes.
Change these? (y/n) [n]: y
Timeout (5 to 120 minutes): 15
```

#### Related commands

```
show system timeout
```

# config user

Opens an editor that allows you to create, edit, and delete user accounts.

## Resource

system

## Syntax

```
config user [no] <"username">
```

Account names must be unique. For example, if there is a group account called `sysadmin` on the RC Manager, you cannot create a user account called `sysadmin`.

## Subcommands

```
alert eligible
alert frequency
show
[no] description
[no] disabled
[no] email
[no] system
[no] expire
[no] password
[no] modem
[no] port #/#
[no] powercontrol
[no] authorized keys
[no] start
[no] subscribe
[no] tacacs
[no] timezone
```

The wildcard character may be used to apply to many resources (such as ports) at once.

**alert eligible**—Availability window for alerting, in cron format—for example, `* 23-14 * * 1-5` to specify any minute during the hours from 11:00 p.m. to 2:00 p.m. UTC, any day of the month, any month, Monday through Friday. Alerts will be sent only during the times specified. For information about using cron format, see “About cron Format” on page 28

**alert frequency**—Maximum alert threshold defining the frequency a user will receive email alerts. Entered in desired number of minutes between alerts

**show**—Display current settings.

**exit**—Exit the user editor.

**no**—Used before optional commands to remove attributes or entries.

**description**—Information about the user; up to 255 alphanumeric characters.

**disabled**—Allows you to suspend the account without deleting it. Use **no disabled** to reactivate a disabled account.

**email [in-band | out-of-band] [terse]**—Specify the email address that will receive administrative messages, optionally distinguishing between in-band and out-of-band email addresses. You can add more than one email address by repeating this command. The **terse** parameter is an optional setting to send only the subject line, which is useful for pagers.

**system <"role">**—Authority for the RC Manager from defined roles. Authority is additive and multiple roles can be applied to a user. If you do not give the account a role with the "allow login" permission on the system resource, this user will not be able to log in to the RC Manager's CLI.

**expire**—Account's MMDDYYYYHHMMSS expiration time—INACTIVE after

**password**—User's password. The password is stored in an MD5 Hash. If entered in text, it is converted. If the hashed version is entered (created on the RC Manager), it is stored intact and can be typed/pasted into the field.

**modem <"role">**—Authority for the modem from defined roles. Authority is additive and multiple roles can be applied by repeating the command. If you do not give the account a role on the modem resource, the user will not be able to use any commands to work with the modem.

**port <"portnumber"> <"role">**—Authority per port from defined roles. Authority is additive and multiple roles can be applied. If you do not give the account a role on a given port resource, the user will not have any access to that port.

**powercontrol <"role">**—Authority for the power controller from defined roles. Authority is additive and multiple roles can be applied. If you do not give the account a role on the `powercontrol` resource, the user will not be able to use any commands to interact with the power controller.

**authorized keys**—SSH certificates may be used instead of passwords. They are also used in place of locally cached passwords if remote authentication servers are unavailable. Multiple certificates may be added to the authorized keys field of a user's account, but each must be pasted in a single contiguous line.

**start**—Account's MMDDYYYYHHMMSS start time—INACTIVE before this date and time.

**subscribe**—By port, chassis, or interface. Syntax for this subcommand is `subscribe [system | powercontrol | port <"port number">] [chassis | interface <"interfacename">] -w <#>` to choose the scope and content of alerts. **subscribe** alone will subscribe to all messages. Additional arguments narrow the scope of the subscription to ports, power control, or the RC Manager itself; and further arguments focus alerts to a managed device's chassis or particular interface. The final optional `-w` argument is the time to wait before sending alerts on this subscription, expressed in minutes.

**tacacs**—Specifies whether the user authenticates via an authentication server. Users added via RADIUS can be edited for authority but will still be authenticated remotely.

**timezone [no dst]**—The time zone offset from UTC for the user, given as +/- 12 UTC. The `no dst` modifier specifies that time is not to be adjusted for Daylight Saving Time.

```
[admin@xyzcoWK01]# config user adent
[config user adent]# password 13tm3ln
[config user adent]# description ISO-OPS Help Desk
[config user adent]# expire 12312007235959
[config user adent]# alert frequency 5
[config user adent]# alert eligible 0 22-08 * * 1-5
[config user adent]# subscribe port 1/1 chassis cpu
[config user adent]# subscribe port 1/1 chassis mem
[config user adent]# subscribe port 1/3 chassis
```

## Related commands

`show user`

# config vpn

Interactive command to specify VPN for the RC Manager after out-of-band connectivity has been established.

## Resource

modem

## Syntax

**config vpn**

## Usage

VPN type is ipsec or pptp.

```
[admin@xyzcoWK01 (modem)]# config vpn
--- Existing Values ---
VPN type: none
Change these? (y/n) [n]: y
--- Enter New Values ---
VPN type: [none]: pptp
PPTP Server IP: []:
User Name: []:
Password []:
Do you want to use encryption for pptp: (y/n):
Do you want to use mppe: (y/n) [n]:
Do you want to refuse 40 bit encryption: (y/n) [n]:
Do you want to refuse 128 bit encryption: (y/n) [n]:
Do you want to refuse stateless encryption: (y/n) [n]:
Do you want to commit these changes? (y/n):
```

```
[admin@xyzcoWK01 (modem)]# config vpn
--- Existing Values ---
VPN type: none
Change these? (y/n) [n]: y
--- Enter New Values ---
VPN type: [none]: ipsec
IPsec Server IP: []:
Group ID: []:
Shared key []:
User Name: []:
Password []:
Do you want to commit these changes? (y/n):
```

## Related commands

**show vpn**

# config xbrowser

Allows you to change the xbrowser configuration for this device.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp, server, tcp

## Syntax

```
config xbrowser
```

## Usage

```
[admin@A101100303 (port1/3)]# config xbrowser
--- Existing Values ---
Browser port: 443
Browser protocol: https
Change these? (y/n) [n]:
```

Browser protocol may be either **http** or **https**.

## Related commands

```
show xbrowser
xbrowser
```

# connect

Connect to another RC Manager using SSH. This command cannot connect the RC Manager to any other host, and it cannot be used to connect to more than one other RC Manager at a time.

## Resource

system

## Syntax

```
connect ["user@"] <"ip address"> ["port"]
```

## Usage

If you omit the username, the admin login will be used.

```
[admin@xyzcoWK01]# connect 172.30.238.103
Connecting to 172.30.238.103
admin's password: *****
RC Manager v3.4 -- Legendary Reliability
```

```
ssh client did not request X11 forwarding
```

```
-----
Port      Hostname          Status      Con Eth Uptime      Processor      Last
-----
1/1 tasman6300      OK          *
1/2 Solaris Build Box          *          262d 23          118d 20
```

- Output removed -

```
-----
Con(sole) or Eth(ernet) link status indicated with '*'
Processor Utilization displayed as last collected, 1 and 5 minute averages
Last Alarm displays time since last Alarm matched.
d=day, h=hour, m=minute, s=second
```

```
[admin@xyzcoDal02]#
```

## Related commands

—

# copy

Move files between ports and to/from the RC Manager from a remote file system.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server, tcp

## Syntax

```
copy <"source"> <"destination">
```

Copy from one port to another port:

```
copy <["port"]<"type"> <"version">> <["port"] <"version">>
```

Port is assumed to be this port if not specified.

Copy from this port to remote host:

```
copy <<"type"> <"version">> <scp | ftp> <"userName@IP[:file]">
```

Copy from remote host to this port:

```
copy <<scp | ftp> <"userName@IP:file">> <<"type"> <"version">>
```

"source" and "destination" parameters are made up of the following choices:

```
type = <os | running-config | startup-config | tech | post>
```

```
version = <candidate | current | previous | archive #>
```

```
port = port #
```

## Usage

Only file types relevant to the device type are supported and are placed in the device's file system on the RC Manager.

```
[admin@xyzcoWK01 (port1/1)]# copy os current port 1/2 candidate
[admin@xyzcoWK01 (port1/1)]# copy port 1/2 os current previous
[admin@xyzcoWK01 (port1/1)]# copy running-config current SCP
joeuser@172.30.235.93
password: *****
Sending... File successfully sent to 172.30.235.93.
[admin@xyzcoWK01 (port1/1)]# copy FTP joeuser@172.30.235.95:running-config
running-config
Retrieved 'running-config' from 172.30.235.9
```

## Related commands

—



# device ping

Instructs the device to ping another device.

## Resource

port

## Makes for which this command is available

Cisco

## Syntax

```
device ping <"ip address">
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# device ping 192.168.1.1
pinging 192.168.1.1 failed.
[admin@xyzcoWK01 (port1/1)]# device ping 172.30.235.94
pinging 172.30.235.94 was successful, round trip time was 4
```

## Related commands

ping

# enable

Change to the authority of another user while continuing the session under the original login.

## Resource

system

## Syntax

```
enable ["username"]
```

## Usage

Session logs will remain tied to the originally authenticated user.

```
[admin@XYZcoWK01]# enable
username: tcmillan
password: *****
[tcmillan@xyzcoWK01]#

[tcmillan@xyzcoWK01]# enable adent
password: *****
[adent@XYZcoWK01]#
```

## Related commands

—

# exit

Returns command context to the `system` resource, or to the resource from which you entered an editor command. The `exit` command is not available from the `system` resource. Use the `logout` command to end the user session.

## Resource

`port`, `powercontrol`, `modem`

## Makes for which this command is available

All

## Syntax

`exit`

## Usage

```
[admin@xyzcoWK01 (port1/1)]# exit

[admin@xyzcoWK01]# config group WestKingstonOps
Found group WestKingstonOps. Modifying group settings.
[config group WestKingstonOps]# user adent
[config group WestKingstonOps]# user pmarvin
[config group WestKingstonOps]# exit
[admin@xyzcoWK01]#
```

## Related commands

`logout`

# history

Displays up to the last 20 commands executed on the RC Manager during the current session.

## Resource

All

## Makes for which this command is available

All

## Syntax

`history`

## Usage

The exclamation mark `!` may be used with the number of a listed command to repeat the command.

```
[admin@xyzcoWK01 (port1/1)]# history
1. show all
2. port 1/1
3. exit
4. port 1/2
5. config initialize
6. show authentication
7. show status
8. show preferences
9. ?
10. history
```

## Related commands

`show session`

# logout

End the current session on the RC Manager.

## Resource

system

## Makes for which this command is available

All

## Syntax

`logout`

## Usage

```
[admin@xyzcoWK01]# logout
```

## Related commands

—

# modem

Navigate to the modem resource.

## Resource

system

## Syntax

`modem`

## Usage

```
[admin@xyzcoWK01]# modem
embedded
[admin@xyzcoWK01 (modem)]#
```

## Related commands

—

# off

Turn off the specified outlet on the power distribution unit.

## Resource

powercontrol

## Syntax

```
off ["outlet #"]
```

## Usage

```
[admin@xyzcoWK01 (powercontrol)]# off 3  
Powering off outlet(s) [3]
```

## Related commands

`on`  
`power`

# on

Turn on the specified outlet on the power distribution unit.

## Resource

powercontrol

## Syntax

```
on ["outlet #"]
```

## Usage

```
[admin@xyzcoWK01 (powercontrol)]# on 3  
Powering on outlet(s) [3]
```

## Related commands

`off`  
`power`

# page-length

Change the number of lines before pausing the display.

## Resource

system

## Syntax

```
page-length [auto | {1..999}]
```

The page-length command with no argument returns the current setting.

When set to `auto`, the RC Manager will attempt to determine the client's screen geometry. If the client does not supply this parameter, the default is 24 lines.

## Usage

```
[admin@xyzcoWK01]# page-length  
Current page length is set to auto  
[admin@xyzcoWK01]# page-length 20  
Current page length is set to 20 lines.
```

## Related commands

```
config system page-length  
show system page-length
```

# ping

Execute an ICMP echo request from the RC Manager to a specific IP address. From the port context, this command attempts to ping the dedicated device IP address. If the dedicated device IP address is not configured, it will attempt to ping the management IP address.

## Resource

system, port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server, tcp

## Syntax

```
ping <"ip address" | -m>
```

From the system context, specify an IP address to ping.

From the port context, specify -m to ping the management IP address.

## Usage

Only specific IP addresses (no broadcast) are supported.

Default routes are used. (Management Ethernet or PPP/PPTP if active)

```
[admin@xyzcoWK01]# ping 172.30.235.93  
PING 172.30.235.93 (172.30.235.93) from 172.30.235.179 : 56(84) bytes of  
data.  
64 bytes from 172.30.235.93: icmp_seq=0 ttl=255 time=347  
64 bytes from 172.30.235.93: icmp_seq=1 ttl=255 time=332  
64 bytes from 172.30.235.93: icmp_seq=2 ttl=255 time=329  
64 bytes from 172.30.235.93: icmp_seq=3 ttl=255 time=327  
--- 172.30.235.93 ping statistics ---  
4 packets transmitted, 4 packets received, 0% packet loss  
round-trip min/avg/max/mdev = 0.327/0.333/0.347/0.023 ms
```

## Related commands

```
device ping
```

# port

Navigate to a port associated with a managed device.

## Resource

All

## Makes for which this command is available

All

## Syntax

```
port <"slot"/#>
```

## Usage

The information about the device connected to the port will be displayed if possible.

```
[admin@xyzcoWK01 (port 1/1)]# port 1/4
AUS-ATL-FR cisco RSP2 IOS 12.2(24a)
Rack 5 LOC G25 Room 235
```

## Related commands

—

# power

Manages power from the device's perspective. The power controller must have been previously configured. Multiple outlets are supported to facilitate devices with multiple power supplies.

Following **power cycle**, the device is checked against a number of measures to assure power cycle was a success. Following **power off**, console status is checked to make sure device has completely shut down, identified by console electrical signals. Following **power cycle** or **power on**, POST (Power On Self Test) takes up to five minutes to time out if an error has occurred.

Rules can be defined to automate this operation using the `powerCycle`, `powerOff`, and `powerOn` actions.

## Resource

modem, port, powercontrol

## Makes for which this command is available

All

## Syntax

```
power <on | off | cycle ["delay"]>
```

The optional delay is in seconds.

## Usage

```
[admin@xyzcoWK01 (port1/1)]# power cycle
Powering off outlet(s) [1, 2]
DSR was active.
CTS was active.
CTS is still active.
```

```
Powering on outlet(s) [1, 2]
Serial link is active.
Reading post
Image decompressed
Device loaded
Post complete.
[admin@xyzcoWK01 (port1/1)]# power on
Powering on outlet(s) [1, 2]
Serial link is active.
Reading post
Device loaded
Post complete.
```

During a terminal pass-through session, you can use the `~p` command in the same way.

### Related commands

```
on
off
```

## powercontrol

Navigate to the port that manages the power distribution unit. If the power controller has not been initialized, use the `config init` command to configure it.

The information about the power controller will be displayed if possible.

### Resource

```
system
```

### Syntax

```
powercontrol
```

### Usage

```
[admin@xyzcoWK01]# powercontrol
ServerTech SentryIPT
Rack 5
```

### Related commands

```
power
```

## ppp

Establishes or ends out-of-band dial-up management connectivity. When you know you will be making device changes that will compromise the integrity of your SSH connection, this functionality will establish a consistent communications link used to monitor or alter the network changes.

Rules can be defined to automate this operation using the `pppOn` and `pppOff` actions.

### Resource

```
modem
```

### Syntax

```
ppp <on | off>
```

## Usage

```
[admin@xyzcoWK01 (modem)]# ppp on
PPP Local Address is 4.230.144.126
PPP is turned on
```

## Related commands

```
config ppp
show ppp
```

# pull os

Used to pull operating system files from network devices. The files are compared to the versions previously stored. If the content is different, the version stored as `current` is moved to `previous`, overwriting the existing `previous` version, and the new file is stored as `current`.

The `pull` process will retry several times if it does not successfully retrieve the file. The file transfer protocol and number of retries are options that default to the best settings for the device; these can be overridden using the `config settings` command. File transfer may be configured as console, TFTP, FTP or XModem.

## Resource

port

## Makes for which this command is available

Alcatel, Cisco, ND Satcom, Netscreen, Tasman

## Syntax

```
pull os
```

## Usage

The OS is scheduled to be pulled periodically during initial configuration. The default interval is 2 weeks. The `pull os` operation can be removed from the schedule using the `config removejob` command.

```
[admin@xyzcoWK01 (port1)]# pull os
Starting pull of Cisco IOS Image
System image file is "slot0:/c3745-js-mz.123-9a.bin"
Backing up os file: slot0:c3745-js-mz.123-9a.bin
Transferring file ...
Receiving c3745-js-mz.123-9a.bin from 172.28.117.22:
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
TFTP upload of c3745-js-mz.123-9a.bin succeeded.
```

## Related commands

```
push os
copy
```



# pull running-config

Used to pull configuration files from network devices. The files are compared to the versions previously stored. If the content is different, the version stored as `current` is moved to `previous`, overwriting the existing `previous` version, and the new file is stored as `current`.

The `pull` process will retry several times if it does not successfully retrieve the file. The file transfer protocol and number of retries are options that default to the best settings for the device; these can be overridden using the `config settings` command. File transfer may be configured as console, TFTP, FTP or XModem.

Pulling a configuration at 9600 baud may take several minutes on some network devices. You may choose to change the default method to TFTP (if available) using the `config settings` command.

Rules can be defined to automate this operation using the `pullRunningConfig` action.

## Resource

`port`

## Makes for which this command is available

Alcatel, Cisco, Comtech, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Tasman, TippingPoint

## Syntax

```
pull running-config
```

## Usage

By default, `pull running-config` is called to checkpoint the device's configuration before allowing terminal pass-through. If the delay before login is more than 20 seconds, you may want to change the default transfer option to another protocol such as TFTP.

The running configuration is scheduled to be pulled periodically during initial configuration. The default interval is every 3 hours. The `pull running-config` operation can be removed from the schedule using the `config removejob` command.

```
[admin@xyzcoWK01 (port1/1)]# pull running-config
Retrieving running-config from device ...
Complete. running-config pulled.
running-config saved to archive as current.
```

## Related commands

```
push running-config
copy
rollback config
```

# pull startup-config

Used to pull configuration files from network devices. The files are compared to the versions previously stored. If the content is different, the version stored as `current` is moved to `previous`, overwriting the existing `previous` version, and the new file is stored as `current`.

The `pull` process will retry several times if it does not successfully retrieve the file. The file transfer protocol and number of retries are options that default to the best settings for the device; these can be overridden using the `config settings` command. File transfer may be configured as console, TFTP, FTP or XModem.

Pulling a configuration at 9600 baud may take several minutes on some network devices. You may choose to change the default method to TFTP (if available) using the `config settings` command.

Rules can be defined to automate this operation using the `pullStartupConfig` action.

## Resource

port

## Makes for which this command is available

Alcatel, Cisco, iDirect, ND Satcom, Nortel, Tasman

## Syntax

```
pull startup-config
```

## Usage

The startup configuration is scheduled to be pulled periodically during initial configuration. The default interval is every 24 hours. The `pull startup-config` operation can be removed from the schedule using the `config removejob` command.

```
[admin@xyzcoWK01 (port1/1)]# pull startup-config
Retrieving startup-config from device ...
Complete. startup-config pulled.
startup-config saved to archive as current.
```

## Related commands

```
push startup-config
copy
rollback config
```

# pull tech

This command allows you to retrieve diagnostic information from network devices when necessary. The information gathered depends on the device. You can view the information using the `show tech` command.

## Resource

`port`

## Makes for which this command is available

Alcatel, Cisco, Netscreen

## Syntax

`pull tech`

## Usage

```
[admin@sup100 (port1/1)]# pull tech  
Pull tech completed and saved as current.
```

## Related commands

`show tech`

# push os

Used to push operating system files to network devices. Use `config settings` to set the primary and secondary file transfer protocols and the maximum number of attempts. TFTP, FTP, and XModem are supported.

Rules can be defined to automate this operation using the `pushOs` action.

## Resource

port

## Makes for which this command is available

Alcatel, Cisco, Juniper, ND Satcom, Netscreen, Tasman

## Syntax

```
push os <candidate | current | previous>
```

## Usage

```
[admin@xyzcoWK01 (port1)]# push os candidate
System image file is "flash:/c1700-y-mz.123-9.bin"
3 interfaces and 3 types found.
Information logged Before Upgrade
Serial Number: FOC08060NSX
Make : cisco
Model : 1760
OS Type : IOS
OS Version : 12.3(9)
Uptime : 14 hours, 22 minutes
Device Image Verified.
Sending c1700-y-mz.123-1a.bin to 10.10.10.1:
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
TFTP download of c1700-y-mz.123-1a.bin succeeded.
Retrieving running-config from device ...
Complete. running-config pulled.
Retrieving running-config from device ...
Complete. running-config pulled.
Issuing 'reload'
98304C1700 platform with 65536 Kbytes of main memory
decompressing
Image decompressed
Image decompressing
Image decompressed
Device loaded
Post complete.
Serial Number: FOC08060NSX
Make : cisco
Model : 1760
OS Type : IOS
OS Version : 12.3(1a)
Uptime : 0 minutes
3 interfaces and 3 types found.
Push OS succeeded.
```

The `push os` operation will try the secondary transfer method if the primary method fails, and will make up to the specified number of attempts if necessary.

The **push os** operation can be scheduled to automatically update using the **config schedule** command.

#### Related commands

```
pull os  
copy
```

## push running-config

Used to push configuration files to network devices. Use **config settings** to set the primary and secondary file transfer protocols and the maximum number of attempts. TFTP, FTP, and XModem are supported.

Rules can be defined to automate this operation using the **pushRunningConfig** action.

#### Resource

```
port
```

#### Makes for which this command is available

Alcatel, Cisco, Comtech, iDirect, Juniper, ND Satcom, Netscreen, Tasman

#### Syntax

```
push running-config <previous | candidate | current> [-reboot]
```

#### Usage

```
[admin@xyzcoWK01 (port1/1)]# push running-config previous  
Copying running-config to device.  
Transferring via XModem. (Attempt 1)  
Sent running-config at 581 B/s.  
File running-config was transferred to the device successfully via XModem.  
runningConfig downloaded to device.
```

The **push** operation will try the secondary transfer method if the primary method fails, and will make up to the specified number of attempts if necessary.

Pushing a running configuration works in the same way as it would on a Cisco device. If an element is present in the stored copy but not the file being pushed, it remains in the configuration. Elements present in the file being pushed but not in the stored copy are added. Elements present in both the stored copy and the file being pushed will be updated.

**push running-config** can be scheduled to automatically update using the **config schedule** command.

#### Related commands

```
pull running-config  
copy  
rollback config
```

# push startup-config

Used to push configuration files to network devices. Use **config settings** to set the primary and secondary file transfer protocols and the maximum number of attempts. TFTP, FTP, and XModem are supported.

Rules can be defined to automate this operation using the `pushStartupConfig` action.

## Resource

port

## Makes for which this command is available

Alcatel, Cisco, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint

## Syntax

```
push startup-config <previous | candidate | current> [-reboot]
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# push running-config previous
Copying running-config to device.
Transferring via XModem. (Attempt 1)
Sent running-config at 581 B/s.
File running-config was transferred to the device successfully via XModem.
runningConfig downloaded to device.
```

The **push startup-config** operation will try the secondary transfer method if the primary method fails, and will make up to the specified number of attempts if necessary.

**push** can be scheduled to automatically update using the **config schedule** command.

## Related commands

```
pull startup-config
copy
```

# reboot

Reboots the device connected to this port. Rules can be defined to automate this operation using the reboot action.

Use the **restart** command to reboot the RC Manager.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, server, tcp

## Syntax

**reboot**

## Usage

A reboot is considered successful when all of the expected checkpoints in the reload have passed.

```
[admin@xyzcoWK01 (port1/1)]# reboot
Issuing 'reload'
Reading post
Bootstrap posted
C2600 platform with 65536 Kbytes of main memory
Image decompressing
Image decompressed
Device loaded
Post complete.
```

## Related commands

**power**  
**restart**

# recover configuration

This command cycles power through the device, causing it to turn on and off, and breaks the device's normal boot sequence. Then it replaces its configuration with the last stored current configuration.

This command is only available for Cisco devices running CatOS or IOS.

## Resource

port

## Makes for which this command is available

Cisco

## Syntax

**recover configuration**

## Usage

```
[admin@xyzcoWK01 (port1/1)]# recover configuration
Attempting to revert startup configuration to current from 14 Aug 21:57
Powering off outlet(s) [1, 2]
DSR was active.
CTS was active.
CTS is still active.
Powering on outlet(s) [1, 2]
Serial link is active.
Attempting to break into ROMmon mode.
Break into ROMmon successful.
Reading post
Image decompressing
Image decompressed
Post complete.
```

## Related commands

```
push running-config
```

# restart

Interactive command that restarts the RC Manager. Use the `reboot` command to restart devices connected to the RC Manager.

Rules can be defined to automate this operation using the `restartSystem` action.

## Resource

```
system
```

## Syntax

```
restart
```

## Usage

This will end your session. Restart usually takes 90 seconds.

```
[admin@xyzcoWK01]# restart
Are you sure you want to restart? (y/n): y
Restarting RC Manager...
```

## Related commands

```
reboot
shutdown
```

# restore

If you need to return an Alcatel device to its certified configuration, use the `restore` command. This overwrites the current device configuration with the stored certified configuration. To use the `restore` command, you must have previously used the `certify` command to save a known good configuration.

The `certify` and `restore` commands are only applicable to Alcatel devices.

## Resource

```
port
```



### Makes for which this command is available

Alcatel

### Syntax

`restore`

### Usage

`restore`

### Related commands

`certify`

## rollback assimilate

Undo baud rate and logging synchronous changes made during the last assimilation process.

### Resource

port

### Makes for which this command is available

Alcatel, Cisco, Comtech, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, server, tcp

### Syntax

`rollback assimilate`

### Usage

```
[admin@xyzcoWK01 (port 1/1)]# rollback assimilate  
Removing buffered logging.  
Unsetting logging synchronous.
```

### Related commands

`assimilate`

## rollback authentication

Undo login configuration changes to restore previous settings.

### Resource

port

### Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp, server, tcp

### Syntax

`rollback authentication`

### Usage

```
[admin@xyzcoWK01 (port 1/2)]# rollback authentication
```

### Related commands

`config authentication`

# rollback config

Undo the last change to the device's configuration.

## Resource

port

## Makes for which this command is available

Alcatel, Cisco, Comtech, Garmin, iDirect, Juniper, Netscreen, Tasman

## Syntax

```
rollback config
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# rollback config
Retrieving running-config from device ...
Complete. running-config pulled.
Transferring via XModem. (Attempt 1)
Initiating file transfer
Transferring file ...
Sent running-config-undo40011.img at 133 B/s.
File running-config-undo40011.img was transferred to the device successfully
via XModem.
Retrieving running-config from device ...
Complete. running-config pulled.
running-config saved to archive as current.
Rollback successful.
running 'write memory'
Retrieving running-config from device ...
Complete. running-config pulled.
running-config saved to archive as current.
```

## Related commands

```
show rollback-config
```

# show alarms

Displays information about current and recent alarms.

Time is offset by the user's time zone offset, listed as a common abbreviation (such as CDT, US Central Daylight Saving Time), or relative to UTC. Alarms lasting a day are listed by their date.

Once an alarm is generated, it silences automatically in 6 minutes. An asterisk denotes that no alarm has occurred in the past 2 minutes.

Alarms remain on the RC Manager as space permits. Alarms are archived on the management server, if one is used.

## Resource

All

## Makes for which this command is available

All

## Syntax

**show alarms** [-all | -cleared | -n | -v]

**-all**—Display alarms that are no longer current but have not been rolled off

**-v**—Display detailed alarm information

**-cleared**—Display alarms that have already been cleared

**-n [#]**—Display up to the specified number of alarms

## Usage

```
[admin@xyzcoWK01 (port1/1)]# show alarms
```

```
PST      Device      Interface      Message
-----  -
06:07    Cat4003
02/13    Cat4003      3/10          *CPU Utilization >80%
          *CRC Errors Increasing
*no alarm in the past 2 minutes.
```

```
[admin@xyzcoWK01 (port1/1)]# show alarms -v
```

```
[Current]
```

```
Start: 2005-02-13 05:14 UTC      Duration: 00:3:22      Count: 4759
Host:  RMA-DST-220              Interface
Port:  4
Description: CPU Utilization >80%
```

## Related commands

**show events**

# show all

Display console, authentication, make, model, OS configuration, current utilization, and memory statistics stored by the RC Manager for each port.

## Resource

All

## Makes for which this command is available

All

## Syntax

**show all**

## Usage

```
[admin@xyzcoWK01]# show all
```

```
Collecting device information . . .
```

```
--- port1/1 ---
```

```
Hostname: tasman-6300-ds3
```

```
Description: tasman6300
```

```
Make: tasman
```

```
Model: 6300
```

```
OS: TiOS
```

```
OS Version: r6
```

```
Management IP:
```

```
Current CPU Utilization: 0%
```

```
CPU Utilization (1 minute average): 0%
CPU Utilization (5 minute average): 0%
Total Memory: 268435456 bytes
Used Memory: 55705024 bytes
Free Memory: 177453792 bytes
console user: tasman
console password: *****
enable user:
enable password: *****
Serial Bit Rate: 9,600
Serial Data Bit: 8
Serial Parity: none
Serial Stop Bit: 1
Serial Flow Control: none
Null modem: false
DSR: false
CTS: false
RX : 6,806,757
TX : 249,371
Overrun Errors: 0
--- port1/2 ---
Hostname: WK_Netra01
Description: Sun Netra T1 105
Make: sun
```

- Output removed -

To redirect the output of this command to a file, see “Redirecting Command Output to a File” on page 18.

### Related commands

```
show status
show dashboard
```

## show answer

Displays out-of-band dial-in settings for the modem.

### Resource

modem

### Syntax

```
show answer
```

### Usage

```
[admin@xyzcoWK01 (modem)]# show answer
disabled
SLV suspended when PPP on
init "" atz
answer after 3 rings
```

### Related commands

```
config answer
```

# show authentication

Displays credentials used to communicate with a device connected to the RC Manager. Use the `show system authentication` command to display authentication information for the RC Manager itself.

## Resource

port, powercontrol

## Makes for which this command is available

All

## Syntax

```
show authentication
```

## Usage

Passwords are always masked when displayed.

```
[admin@xyzcoWK01 (port1/1)]# show authentication
console user: tasman
console password: *****
enable user:
enable password: *****
```

## Related commands

```
config authentication
config system authentication
show system authentication
```

# show buffer

Displays buffer data from the modem or device. This can be helpful in debugging device issues. Data is stored in a 1 MB current buffer; when this buffer fills, it is renamed `previous` and a new `current` buffer is created.

## Resource

modem, port, powercontrol

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server, tcp

## Syntax

```
show buffer [-raw | -previous]
```

The command `show buffer` displays the most recent 1 MB of data. Use the optional `-previous` parameter to view the `previous` buffer.

Use the optional `-raw` parameter to display the buffer contents without additional formatting.

To redirect the output of this command to a file, see “Redirecting Command Output to a File” on page 18.

Syntax: **show buffer** | **scp username@host:/filepath/**

### Usage

```
[admin@XYZcoWK01 (port1/1)]# show buffer
-----
> ==== Began Wed Mar 21 10:38:52 UTC 2007 ====
> 3/19/2007-20:25:15.433 -10- CT3 CONFIG ICSLOT TE1[5] timeslotMap changed
>
> 3/19/2007-20:25:15.333 -10- CT3 CONFIG ICSLOT TE1[4] timeslotMap changed
>
> 3/19/2007-20:25:15.299 -10- CT3 CONFIG ICSLOT TE1[3] timeslotMap changed
>
> 3/19/2007-20:25:15.199 -10- CT3 STATUS ICSLOT TE1[28] lineStatus : RAIS
(end)
>
> 3/19/2007-20:25:15. 83 -10- CT3 STATUS ICSLOT TE1[27] lineStatus : RAIS
(end)
>
> 3/19/2007-20:25:14.983 -10- CT3 STATUS ICSLOT TE1[26] lineStatus : RAIS
(end)
>
> 3/19/2007-20:25:14.883 -10- CT3 STATUS ICSLOT TE1[25] lineStatus : RAIS
(end)
>
> 3/19/2007-20:25:14.799 -10- CT3 STATUS ICSLOT TE1[24] lineStatus : RAIS
(end)
>
---Press 'q' to quit, any other key to continue--- [1/971]
```

### Related Commands

—

# show config

Displays the RC Manager's configuration in XML format. The configuration does not include scheduled jobs, device-specific files, or the IP address of the RC Manager. To export this information as an XML file, use the `config backup` command.

## Resource

system

## Syntax

`show config`

## Usage

```
[admin@xyzcoWK01]# show config
<?xml version="1.0" encoding="UTF-8"?>
<SystemConfiguration>
  <version>3.3</version>
  <users>
    <user>
      <name>admin</name>
      <password>$sha1$xAp/oil5no+r$Aak6wfGKIXpioqmGjRxScmn8lhg=</
password>
      <alertFrequency>0</alertFrequency>
      <alertEligibility>* * * * *</alertEligibility>
      <timeZone>UTC</timeZone>
      <dst>>false</dst>
      <active>>true</active>
      <radiusUser>>false</radiusUser>
      <emails/>
    </user>
    <user>
      <name>adent</name>
      <password>$sha1$AzigyEAT44VY$6EPKyLQLsa1cv3mA8IQxSSbBscE=</
password>
      <description>analyst - WestKingston</description>
      <alertFrequency>2</alertFrequency>
      <alertEligibility>* * * * *</alertEligibility>
---Press 'q' to quit, any other key to continue--- [1/205]
- Output removed -
```

To redirect the output of this command to a file, see “Redirecting Command Output to a File” on page 18.

## Related commands

```
config backup
config export
config import
```

# show dashboard

Brief display of the RC Manager and managed devices. When you issue this command from the system resource, the output is the same information that is displayed when you log in. From other resources, only the relevant subset of this information is displayed.

## Resource

All

## Makes for which this command is available

All

## Syntax

```
show dashboard
```

## Usage

Using show dashboard from port, powercontrol, or modem will filter the results.

```
[admin@xyzcoWK01]# show dashboard
ssh client did not request X11 forwarding
-----
Port      Hostname                Status      Con Eth Uptime    Processor      Last
Utilization                               Alarm
-----
1/1 tasman-6300-ds3      OK          *          6d 3h      00/00/00      1m 31s
1/2 KM_WK_Netra OK          * 22h 23m    01/00/00
1/3 native
1/4 native
PWR native
MDM embedded          *
E xyzcoWK01           OK          *          00/00/01      3h 45m
-----
Con(sole) or Eth(ernet) link status indicated with '*'
Processor Utilization displayed as last collected, 1 and 5 minute averages
Last Alarm displays time since last Alarm matched.
d=day, h=hour, m=minute, s=second
```

## Related commands

```
show status
```

# show date

Displays the RC Manager's current date.

## Resource

system

## Syntax

```
show date
```

## Usage

```
[admin@xyzcoWK01]# show date
Displayed time is 01/04/2007 22:14:16 PST
RC Manager time is 01/05/2007 06:14:16 UTC
```

## Related commands

```
config date
config system ntp
```



# show device change

Display net changes to a device after a pass-through operation. Use the `show device changes` command first to display a list of changes; then use the `show device change` command to view information about the change of interest.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, server, tcp

## Syntax

```
show device change <"ID #">
```

The `ID #` parameter is the change identification number listed for this change in the `show device changes` command.

## Usage

Changes that represent additions are prefixed with the plus sign `+`; changes that represent deletions are prefixed with the minus sign `-`. Other lines are included for context.

```
[admin@xyzcoWK01 (port 2/1)]# show device change 9541
-----
User: djones
From: 156.30.1.22
Changed: Feb 15 06:46:02 UTC 2005
Comment:
-----
router bgp 100
+neighbor 180.10.30.4 remote-as 3498
-----
--DONE--
```

## Related commands

```
show device changes
```

# show device changes

Displays a summary of changes to a device. The list can be filtered by user ID. To see detailed information about a change, use the `show device change` command.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, server, tcp

## Syntax

```
show device changes ["userID"]
```

Use the optional **userID** parameter to view changes made by a specific user.

### Usage

```
[admin@xyzcoWK01 (port 2/1)]# show device changes
id      user      ip address      changed
-----
98305   ksmith    156.38.66.1     Feb 15 06:46 UTC
61233   djones    156.38.125.55   Jan 31 10:46 UTC
98305   secadm    156.38.100.2    Jan 30 06:00 UTC
98305   ksmith    156.38.66.1     Jan 16 18:46 UTC
```

### Related commands

**show device change**

## show device logging

Displays settings for collection of a device's log.

### Resource

port

### Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, server, tcp

### Syntax

**show device logging**

### Usage

```
[admin@xyzcoWK01 (port1/1)]# show device logging
Set the console to use synchronous logging: yes
Set the console to use logging buffered: yes
Device buffer polling interval: 30
Clear device log buffer on poll: yes
Port syslog forwarding enabled: no
Syslog server IP:
Syslog port number: 514
Syslog facility:
```

### Related commands

**config device logging**  
**show device syslog**

## show device syslog

Displays the current syslog retrieved from the device. The last 20 currently available parsed console messages are displayed.

### Resource

port

### Makes for which this command is available

Alcatel, Cisco, Comtech, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, server

### Syntax

```
show device syslog [-n <"number">
```

**-n <"number">**—number of lines

### Usage

Like the interface statistics and RC Manager logs, the device syslog messages are rolled off to archive hosts or to export hosts, and only the current logs are displayed. The default interval for the roll-off is 60 minutes.

```
[admin@xyzcoWK01 (port1/3)]# show device syslog
12/06/06 17:09:01.498 5 ETHC PORTTOSTP Port 2/3 joined bridge port 2/3
12/06/06 17:09:01.484 5 ETHC PORTTOSTP Port 2/2 joined bridge port 2/2
12/06/06 17:09:01.469 5 ETHC PORTTOSTP Port 2/1 joined bridge port 2/1
12/06/06 17:09:01.455 5 SYS MOD_OK Module 2 is online
12/06/06 17:07:50.891 5 SYS MOD_OK Module 1 is online
12/06/06 17:07:50.868 2 SYS PS_NFANFAIL Power supply 1 failed
```

### Related commands

`show device logging`

## show diff

Displays differences between versions of similar configuration elements.

### Resource

port

### Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, server, tcp

### Syntax

```
show diff <running-config | startup-config | post> <"file version"> <"file version">
```

### Usage

Additions are prefixed with the plus sign +; deletions are prefixed with the minus sign -.

```
[admin@xyzcoWK01 (port1/1)]# show diff running-config
previous Fri Oct 07 02:07:34 UTC 2005
current Sun Oct 09 19:09:11 UTC 2005
interface FastEthernet3/13
+ switchport access vlan 75
- switchport access vlan 315
```

### Related commands

—

# show directory

Displays files stored for each supported device.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server, tcp

## Syntax

```
show directory [-v]
```

The `-v` parameter adds file size and date display.

## Usage

Files are associated with a particular port, make, model, and OS combination. If you change a device on one of the RC Manager's ports, the files will not be accessible from that device unless it is a similar make, model, and OS combination.

```
[admin@xyzcoWK01 (port1/1)]# show dir
Config
  Startup
    Current  startup-config
    Previous startup-config
OS
  Current  cat4000-k8.7-6-7.bin
```

## Related commands

copy

# show environment

Displays the current and average temperature recorded by the RC Manager.

## Resource

system

## Syntax

```
show environment
```

## Usage

```
[admin@xyzcoWK01]# show environment
Current temperature: 84.83 degrees
Average temperature over the last hour: 84.56 degrees
```

## Related commands

config environment

# show events

Display recent events on this resource. Like alarms, events are single occurrences that do not have durations.

## Resource

system, port, modem

## Makes for which this command is available

All

## Syntax

```
show events [-g] [-n <#>] [-v]
```

**-g**—Show latitude and longitude (only available on ports connected to supported GPS devices).

**-n <#>**—Specify maximum number of events.

**-v**—Use multiple lines

## Usage

```
[admin@xyzcoWK01]# show events
UTC    Context                Message
-----
07/02  admin@172.30.235.145    User completed a terminal session. (No changes wer
07/02  admin@172.30.235.145    User completed a terminal session with changes.
02:41  tasman-6300-ds3        Pull running config completed.
02:41  tasman-6300-ds3        Pull startup config completed.
(output removed)
```

## Related commands

```
show gps events
show log event
```

# show gps events

Displays GPS-tagged event history.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp, server, tcp

## Syntax

```
show gps events
```

## Usage

```
show gps events
```

## Related commands

—

# show gps position

Displays GPS positioning information.

## Makes for which this command is available

Garmin

## Resource

port

## Syntax

```
show gps position
```

## Usage

```
[admin@xyzcoWK01 (port1/2)]# show gps position
UTC          Latitude          Longitude          Satellites
-----
03:07:41     30d 16' 13.914" N  97d 44' 28.758" W  10
03:12:43     30d 16' 13.896" N  97d 44' 28.758" W  10
03:17:43     30d 16' 13.890" N  97d 44' 28.758" W  10
03:22:43     30d 16' 13.896" N  97d 44' 28.752" W  10
03:27:43     30d 16' 13.896" N  97d 44' 28.740" W  10
03:32:43     30d 16' 13.890" N  97d 44' 28.734" W   9
```

## Related commands

—

# show group

Displays group accounts and individual group account attributes.

## Resource

system

## Syntax

```
show group [groupname]
```

Use the **[groupname]** parameter to show information about a specific group account, or omit it to show a list of group accounts.

## Usage

```
[admin@xyzcoWK01]# show group southwestOps
southwestOps
created 06/15/2007 18:01:16 UTC
description southwest region operators
email southwest_ops@xyzco.us.com
start 2007-07-01 00:00:00.0
expire 2007-12-31 23:59:59.0
Group is currently INACTIVE
user amarvin
user adent
user lprosser
user fchurch
```

```
powercontrol - operator
modem - operator
system - operator
port1/1 - operator
port1/2 - operator
port1/3 - operator
port1/4 - operator
```

### Related commands

```
config group
```

## show info

Displays a device's make, model, OS, and address information. Current statistics for memory and processor utilization are also displayed and collected if not currently monitored.

### Resource

```
modem, port, powercontrol
```

### Makes for which this command is available

All

### Syntax

```
show info
```

### Usage

```
[admin@xyzcoWK01 (port1/1)]# show info
Hostname: Cat4003
Description: 86012222-rms235
Make: cisco
Model: WS-C4003
OS: CatOS
OS Version: 7.6(7)
Management IP: 172.30.235.11
Current CPU Utilization: 0.0%
CPU Utilization (1 minute average): 7.8%
CPU Utilization (5 minute average): 6.3%
Total Memory: 54049576 bytes
Used Memory: 4179536 bytes
Free Memory: 49870040 bytes
```

### Related commands

```
show status
config info
```

# show install-history

Displays the RC Manager's software upgrade history.

## Resource

system

## Syntax

```
show install-history
```

## Usage

```
[admin@xyzcoWK01]# show install-history
On 01/04/2005 09:35 UTC version 2.6 was installed successfully.
On 02/20/2007 19:16 UTC version 3.0 was installed successfully.
On 05/25/2007 20:30 UTC version 3.1 was installed successfully.
On 07/03/2007 19:27 UTC version 3.2 was installed successfully.
On 09/29/2007 16:46 UTC version 3.3 was installed successfully.
```

## Related commands

```
show version
```

# show interface

Displays collected interface statistics and any current alarms on the specified interface.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Juniper, Netscreen, Nortel, Tasman, TippingPoint

## Syntax

```
show interface <"interface name"> [-n <#>]
```

**-n <#>**—number of records to display

## Usage

Statistical data is purged from the local database based on available disk space but is available, by export or archive, for long term access.

Service module data is displayed using the **show service-module** command.

```
[admin@xyzcoWK01 (port 1/1)]# show interface FastEthernet0/0
Displaying Interface Config
-----
Found 1 config entries for interface in the database.
Admin Status: up                               Arp Timeout: 04:00:00
Arp Type: ARPA                                 Autonegotiation: N/A
Bandwidth: 100000                               Delay: 100
Encapsulation: ARPA                             RC Manager Device: N/A
Full Duplex Mode: N/A                           Hardware: AmdFE
Id: 79a07db2-001e-11d9-a528-00a0f000fa01
```



```

Input Flow Control: N/A
Keep Alive Set: N/A
Mac Address: 0005.5ed0.cd40
Mtu: 1500
Queueing Strategy: fifo
-----
Ip Address: 66.193.254.226/29
Loopback Set: false
Media Type: N/A
Output Flow Control: N/A
Timestamp: 2004-09-06 16:04:47.372

```

#### Displaying Interface Statistics

```

-----
Found 1 statistical entry for interface in the database.
RC Manager Device: N/A
Id: 9a2a69be-001e-11d9-a528-00a0f000fa01
Input Aborted Packets: 0
Input Broadcast Packets: 4220
Input CRC Errors: 0
Input Errors: 0
Input Frames: 0
Input Ignored Packets: 0
Input Alignment Errors: 0
Input Bytes: 3873849709
Input Dribbles: 0
Input Frame Errors: 0
Input Giants: 0
Input Lack Of Resource Errors: 0
< example text removed >
-----
Found 0 alerts for interface in the database.

```

#### Related commands

```

config monitors
show pingstats

```

## show log event

Displays the RC Manager's log of automated events, user actions, and other threshold issues.

#### Resource

system, modem, port

#### Makes for which this command is available

All

#### Syntax

```
show log event [-l <level>] [-m <"email">] [-n <#>]
```

**-l <level>**—Syslog level

**-m <"email">**—Email address to send report

**-n <#>**—Max number of messages

#### Usage

```

[admin@xyzcoWK01]# show log event
UTC          L      Context      Message
-----
14:18:58     5      modem        Modem Line Disconnected.
14:20:58     5      modem        Modem Line Disconnected.
14:22:58     5      modem        Modem Line Disconnected.
14:24:58     5      modem        Modem Line Disconnected.
14:26:58     5      modem        Modem Line Disconnected.

```

#### Related commands

```
show events
```

# show log rule

This command displays results from the rules engine as it evaluates conditions.

Before you can show the rule log, you must enable rule logging with the `config log rule` command.

## Resource

modem, port

## Makes for which this command is available

All

## Syntax

```
show log rule [-c] [-i <"interface">] [-m <"email">] [-n <#>] [-r <"rule">]
```

`-c`—Show only chassis rule events.

`-i <"interface">`—Show only rule events for a particular interface.

`-m <"email">`— Email address to send the report.

`-n <#>`—Maximum number of messages to show.

`-r <"rule">`—Show only rule events for the specified rule.

## Usage

```
show log rule -n 25 -r consoleHung
```

## Related commands

`config log rule`

# show monitors

Displays a list of monitors for the current device.

## Resource

All

## Makes for which this command is available

All

## Syntax

```
show monitors
```

## Usage

```
[admin@xyzcoWK01 (port1/3)]# show monitors
Listing currently scheduled monitors for device: port1/3
1: [Interval: 00:00:30 Mask: * * * * *] rulesMonitor chassis none "" 30
```

## Related commands

`config monitors`  
`config removejob`

# show outlets

Displays powercontrol outlet mapping.

## Resource

powercontrol

## Syntax

**show outlets**

## Usage

```
[admin@xyzcoWK01 (powercontrol)]#  
Outlet 1 goes to interface port1/1  
Outlet 2 goes to interface port1/2  
Outlet 4 goes to interface port1/4
```

## Related commands

```
config outlets  
on  
off  
power
```

# show pingstats

Shows ping results from the current port.

## Resource

port

## Makes for which this command is available

Cisco

## Syntax

```
show pingstats [-all | -n <#>]
```

**-all**—All ping results

**-n <#>**—Maximum number of ping results

## Usage

In the Success column, \* represents a positive result; blank is negative

```
[admin@xyzcoWK01 (port1/4)]# show pingstats  
UTC          Host          Success      Round Trip Time  
-----  
22:17       172.30.244.252  *           1.0 ms  
22:17       172.30.244.252  *           1.0 ms  
22:16       172.30.244.252  *           1.0 ms  
22:16       172.30.244.252  *           1002.0 ms
```

## Related commands

```
show interface
```

# show ports

Displays the status of devices on each port.

## Resource

system

## Syntax

**show ports**

## Usage

The status column is blank if there are no current alarms.

```
[admin@xyzcoWK01]# show ports
Port          Host Name          Make      Model      OS          Status
----          -
modem         embedded
port1/1       tasman-6300-ds3   tasman    6300       TiOS r6
port1/2       KM_WK_Netra      sun       solaris 5.10
Port1/3       Cat6009          cisco     WS-C6009   CatOS 7.6(7)
Port1/4       native
powercontrol native
```

## Related commands

**show status**

# show post

Displays archived power-on self-test (POST) messages. The self-test is only captured if a device reboots or power cycles through it.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, server

## Syntax

**show post** [**current** | **previous** | **archive #**]

Specify the POST message to display using the **current**, **previous**, or **archive #** parameter.

## Usage

```
[admin@xyzcoWK01 (port1/2)]# show post
WS-X4012 bootrom version 6.1(5), built on 2003.03.19 16:59:08
H/W Revisions:   Meteor: 4   Comet: 10   Board: 2
Supervisor MAC addresses: 00:02:16:4d:83:00 through 00:02:16:4d:86:ff (1024
addresses)
Installed memory: 64 MB
Testing LEDs.... done!
The system will autoboot in 5 seconds.
Type control-C to prevent autobooting.
rommon 1 >
```

```
The system will now begin autobooting.
Autobooting image: "bootflash:cat4000-k8.7-6-7.bin"
.....
#####
#
Starting Off-line Diagnostics
Mapping in TempFs
Board type is WS-X4012
DiagBootMode value is "post"
Loading diagnostics...
Power-on-self-test for Module 1: WS-X4012
Status: (. = Pass, F = Fail)
processor: .          cpu sdram: .          eprom: .
nvram: .             flash: .             enet console port: .
switch port 0: .     switch port 1: .     switch port 2: .
switch port 3: .     switch port 4: .     switch port 5: .
switch port 6: .     switch port 7: .     switch port 8: .
switch port 9: .     switch port 10: .    switch port 11: .
switch registers: .  switch sram: .
Module 1 Passed
Exiting Off-line Diagnostics
Testing Switch Chip 0 switching memory...passed.
```

#### Related commands

—

## show ppp

Displays the status of the out-of-band point-to-point protocol (PPP) and VPN.

#### Resource

modem

#### Syntax

```
show ppp
```

#### Usage

```
[admin@xyzcoWK01 (modem)]# show ppp
PPP active: address 4.230.135.84, duration 43 minutes
PPTP active: address 172.30.230.45
```

#### Related commands

```
config ppp
```

```
ppp
```

## show privileges

Displays a list of commands available to the user, by resource.

#### Resource

system

#### Syntax

```
show privileges [username]
```

By default, this command shows the privileges associated with the username under which you are logged in. Specify another username to view the privileges associated with that account.

## Usage

```
[admin@XYZcoWK01]# show priv pjeltz
User pjeltz - port1/2
-----
config password
login
ping
show ::
    alarms  date  directory  environment  session  status  version  who
User pjeltz - port1/4
-----
User pjeltz - modem
-----
clear ::
    counters  log  service-module
config ::
    backup  environment  monitors  password  removejob
config system ::
    page-length  timeout
connect
copy
device ping
login
ping
power
ppp ::
    off  on
pull ::
    os  running-config  startup-config  tech
reboot
restart
show ::
    alarms  all  answer  date  diff  directory  environment  events
info  log  monitors  pingstats  ports  post  ppp  pptp  properties
rollback-config  running-config  schedules  session  settings  startup-config
status  tech  version  who
show device ::
    change  changes  logging  syslog
show system ::
    banner  email  ip  keypad  page-length  properties  pulse  serial
timeout
show protocols shadow
suspend
terminal
User pjeltz - port1/1
-----
config password
login
ping
show ::
    alarms  date  directory  environment  session  status  version  who
--- Output Removed ---
```

## Related commands

```
config group
config role
config user
show role
show user
```

# show properties

Displays configured name/value pairs for a port. To display the properties set for the RC Manager, use the `show system properties` command.

## Resource

port, modem

## Makes for which this command is available

All

## Syntax

```
show properties
```

## Usage

```
[admin@xyzcoWK01 (port1/2)]# show properties
satellite: AMSAT
contact: Joe Technician
country: United States
bandwidth: 1.5m
installDate: 02/16/06
```

## Related commands

```
config properties
config system properties
show system properties
```

# show protocols pass-through

Display pass-through or shadow settings for the current resource.

## Resource

port, modem, powercontrol

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server, tcp

## Syntax

```
show protocols pass-through
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# show protocols pass-through
SSH pass-through port: 2001
```

## Related commands

```
config protocols pass-through
```

# show protocols shadow

Displays terminal shadow settings for the current resource.

## Resource

port, modem, powercontrol

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server, tcp

## Syntax

```
show protocols shadow
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# show protocols shadow
Enable: false
Using system management IP: 172.30.238.102
Port: 0
```

## Related commands

```
config protocols shadow
```

# show restrict

Displays the restrictions placed on automated procedures. Automated procedures may be restricted to occur only at specific times (such as weekends) or at specified minimum intervals (such as no more than every half-hour, or 1800 seconds).

## Resource

system

## Syntax

```
show restrict <"actionName" | all> ["port"]
```

## Usage

```
[admin@A101100303]# show restrict reboot
name reboot
port port1/4
mask * * * * 0,6
interval is not defined
```

## Related commands

```
config restrict
```



# show role

Displays the permissions associated with a role. Most permissions correspond to CLI commands.

The industry standard `admin`, `security`, `analyst`, `operator`, and `guest` roles are predefined. The RC Manager may also have other roles created using the `config role` command.

## Resource

system

## Syntax

```
show role ["role name"]
```

`show role` displays all roles.

## Usage

```
[admin@xyzcoWK01]# show role guest
guest
    allow config password
    allow login
    allow ping
    allow show alarms
    allow show date
    allow show directory
    allow show environment
    allow show session
    allow show status
    allow show version
    allow show who
```

## Related commands

`config role`

# show rollback-config

Displays the transactional rollback contents that would be applied to the device's running configuration if the `rollback config` command were called.

## Resource

port

## Makes for which this command is available

Alcatel, Cisco, Comtech, Garmin, iDirect, Juniper, Netscreen, Sun, Tasman, ppp

## Syntax

```
show rollback-config [candidate | current | previous | archive #]
```

## Usage

```
[admin@xyzcoWK01 (port 1/4)]# show rollback-config
!
router ospf 100
  no network 172.30.254.16 0.0.0.3 area 20
  network 172.30.254.16 0.0.0.3 area 25
!
```

## Related commands

`rollback config`

# show rule

Displays rules that can be applied to monitors that initiate alerting and action.

## Resource

system

## Syntax

```
show rule <"rulename" | *>
```

Specify the name of a rule, or use the \* character to show all rules defined on the RC Manager.

## Usage

```
[admin@xyzcoWK01]# show rule modemLineDisconnected
rule modemLineDisconnected
action alarm MODEM_LINE_DISCONNECTED
conditions
modem.response equals "NO DIALTONE" 2i OR
modem.response equals "NO LINE" 2i
exit
exit
```

## Related commands

```
config rule
show ruleset
```

# show ruleset

Displays rules and/or rulesets.

## Resource

system

## Syntax

```
show ruleset <"ruleset name" | *>
```

Specify the name of a ruleset, or use the \* character to show all rulesets defined on the RC Manager.

## Usage

Rules separated by the pipe | character are evaluated in parallel. Rules separated by commas are evaluated sequentially; evaluation stops at the first match.

```
[admin@xyzcoWK01]# show ruleset default
ruleset default
description Rules designed to troubleshoot Serial Interfaces
rules
carrier | physical
exit
exit
[admin@xyzcoWK01]# show ruleset recoverConsole
ruleset recoverConsole
description recovering the device when it has become unusable
rules
consoleHung, cpuFiveMinuteAverageGreaterThan90,
cpuOneMinuteAverageGreaterThan90
```

```
exit
exit
```

### Related commands

```
config rule
config ruleset
config monitors
show rule
```

## show running-config

Displays collected running configuration from a device.

### Resource

port

### Makes for which this command is available

Alcatel, Cisco, Comtech, Garmin, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp

### Syntax

```
show running-config [previous | candidate | archive #]
```

### Usage

```
[admin@xyzcoWK01 (port1/1)]# show running-config
!
version 12.0
no service pad
service Timestamps debug uptime
service Timestamps log uptime
no service password-encryption
!
hostname DMZ-2948
!
no logging console
!
!
interface FastEthernet1
 no ip address
 no ip directed-broadcast
 no ip mroute-cache
 bridge-group 1
!
interface FastEthernet2
 no ip address
 no ip directed-broadcast
 no ip mroute-cache
 bridge-group 1
!
interface FastEthernet3
 no ip address
 no ip directed-broadcast
 no ip mroute-cache
< example text removed >
```

### Related commands

```
pull running-config
show startup-config
```

# show schedules

Displays scheduled jobs for the network device.

## Resource

system, port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp, server, tcp

## Syntax

**show schedules**

## Usage

The sequence numbers are unique for the RC Manager. The frequency and internal command are displayed.

```
[admin@xyzcoWK01 (port1/3)]# show schedule
Listing currently scheduled jobs for device: port3
0: [Interval: 00:05:00 Mask: * * * * *]deviceInfo
1: [Interval: 03:00:00 Mask: * * * * *]pullConfig running-
2: [Interval: 24:00:00 Mask: * * * * *]pullConfig startup-
3: [Interval: 336:00:00 Mask: * * * * *]pullOS
```

## Related commands

**config schedule**  
**config removejob**

# show serial

Displays the device's serial console settings and current statistics. To display the RC Manager's console port parameters, use the `show system serial` command.

## Resource

modem, port, powercontrol

## Makes for which this command is available

All

## Syntax

**show serial**

## Usage

```
[admin@xyzcoWK01 (port1/4)]# show serial
Serial Bit Rate: 9,600
Serial Data Bit: 8
Serial Parity: none
Serial Stop Bit: 1
Null modem: false
DSR: true
CTS: false
RX : 378,015
```

```
TX : 20,335
Overrun Errors: 0
```

### Related commands

```
config serial
config system serial
show system serial
```

## show service-module

Displays collected interface statistics and any carrier alarms on that interface.

### Resource

port

### Makes for which this command is available

Cisco

### Syntax

```
show service-module <"interface name"> [-n <#>]
```

Use the optional `-n` parameter with an integer to specify the number of records to display.

### Usage

Statistical data is purged from the local database based on available storage and is available, by export or archive, for long term access.

```
[admin@xyzcoWK01 (Port 1/1)]# show service-module Serial0/0
Module type is T1/fractional
  Hardware revision is 0.88, Software revision is 0.2,
  Image checksum is 0x73D70058, Protocol revision is 0.1
Receiver has no alarms
Framing is ESF, Line Code is B8ZS, Current clock source is line,
Fraction has 2 timeslots (64 Kbits/sec each), Net bandwidth is 128 Kbits/
sec.
Last clearing of alarm counters null
  loss of signal      :0,
  loss of frame      :0,
  AIS alarm          :0,
  Remote alarm       :10,
  Module access errors :0,
Data in current interval (602 seconds elapsed):
  0 Line Code Violations, 0 Path Code Violations
  0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs,0 Degraded Mins
  0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail Secs
```

### Related commands

```
config monitors
```

# show session

Displays the interactive session log collected during a CLI session with the RC Manager. All information originally displayed on the screen is captured. Each user session is logged and the full transcript can be displayed for review. The current session displays by default if no session number is supplied. The session numbers available can be listed using the `show sessions` command.

## Resource

system

## Syntax

```
show session ["sessionID"]
```

"sessionID" identifies the session to display.

## Usage

```
[admin@xyzcoWK01]# show session 32771
User: pamarvin
From: 172.30.5.24
Logged In: Jan 28 21:31:59 UTC 2008
Logged Out: Jan 28 21:38:10 UTC 2008
-----
> RC Manager v3.4 -- Legendary Reliability
>
> ssh client did not request X11 forwarding
> -----
> Port      Hostname          Status      Con Eth Uptime   Processor      Last
> -----
>          Utilization      Alarm
> -----
> 1/1 cisco2950      OK          *          12d 17h  24/29/23
>
(output removed)
>
> [admin@A101100303]# port 1/1
> Cisco
> cisco2950
>
> [admin@A101100303 (port1/1)]# sho proto sha
> Enable: false
> Using RC Manager management IP: 172.30.151.109
> Port: 0
>
(output removed)
```

## Related commands

```
show sessions
```

# show sessions

Displays logged sessions including session ID, user ID, source address and login/logout timestamps.

## Resource

system

## Syntax

```
show sessions [userID]
```

Use the optional [userID] parameter to filter the session list by user.

## Usage

```
[admin@xyzcoWK01]# show sessions
id          user          ip address      logged in        logged out
-----
32776      admin         172.30.5.24     Jan 29 16:49 UTC
32775      admin         172.30.5.24     Jan 29 14:53 UTC   Jan 29 15:23 UTC
32774      admin         172.30.5.24     Jan 28 23:45 UTC   Jan 28 23:52 UTC
32773      admin         172.30.5.24     Jan 28 22:44 UTC   Jan 28 23:36 UTC
32772      admin         172.30.5.24     Jan 28 21:37 UTC   Jan 28 22:16 UTC
32771      pamarvin     172.30.5.24     Jan 28 21:31 UTC   Jan 28 21:38 UTC
32770      admin         172.30.5.24     Jan 28 21:17 UTC   Jan 28 21:36 UTC
32769      admin         172.30.5.24     Jan 28 16:08 UTC   Jan 28 17:20 UTC
32768      admin         172.30.5.24     Jan 25 23:49 UTC   Jan 25 23:55 UTC
5          admin         172.30.5.24     Jan 25 23:13 UTC   Jan 25 23:43 UTC
4          admin         172.30.5.24     Jan 25 19:24 UTC   Jan 25 22:31 UTC
3          admin         172.30.5.24     Jan 25 16:46 UTC   Jan 25 18:26 UTC
2          admin         172.30.5.24     Jan 25 15:30 UTC   Jan 25 16:45 UTC
1          admin         172.30.5.24     Jan 25 15:24 UTC   Jan 25 15:29 UTC
```

## Related commands

```
show session
show who
```

# show settings

Displays the settings for the device.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server, tcp

## Syntax

```
show settings
```

## Usage

```
[admin@XYZcoWK01 (port1/1)]# show settings
1 Assimilated terminal speed: 9,600
2 Modify terminal serial speed on assimilation: false
3 Device configuration pull method: console
4 Device configuration push method: xmodem
5 Alternative device configuration push method: tftp
6 Device configuration push retries: 3
7 Automatic configuration rollback: [disabled/manual/automatic] automatic
8 Count delay before automatic configuration rollback: 75
9 Issue 'write memory' after configuration rollback: true
10 Verify OS upgrade: true
11 Use manual boot during upgrade, if applicable: true
12 OS image push method: tftp
13 Alternative OS image push method: xmodem
14 Attempt to use XModem-1K (first attempt only): true
15 Save Configuration on change before reboot? true
16 Reset console and telnet on auth. change? true
17 Previous OS image not found, continue? true
18 Maximum OS image push retry attempts: 3
19 Device reboot timeout (seconds): 300
20 Force the device to reboot immediately after pushing the OS: true
21 Device pass through timeout(seconds): 300
```

## Related commands

```
config settings
```

# show startup-config

Displays the device's collected startup configuration.

## Resource

port

## Makes for which this command is available

Alcatel, Cisco, iDirect, ND Satcom, Nortel, Tasman

## Syntax

```
show startup-config [previous | candidate | archive #]
```

## Usage

```
[admin@xyzcoWK01 (port1/1)]# show startup-config previous
!  
version 12.0  
no service pad  
service Timestamps debug uptime  
service Timestamps log uptime  
no service password-encryption  
!  
hostname DMZ-2948  
!  
no logging console  
!  
ip subnet-zero  
no ip routing  
bridge irb  
!  
interface FastEthernet1  
  no ip address  
  no ip directed-broadcast  
  no ip mroute-cache  
  bridge-group 1  
!  
interface FastEthernet2  
  no ip address  
  no ip directed-broadcast  
  no ip mroute-cache  
  bridge-group 1  
!  
interface FastEthernet3  
  no ip address  
  no ip directed-broadcast  
  no ip mroute-cache
```

## Related commands

```
pull start-up config  
show running-config
```



# show status

Displays the current device status. The command schedules an interactive collection to gauge the operational state of the device.

## Resource

port, modem

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp, server

## Syntax

```
show status
```

## Usage

If there is a monitor or scheduled job executing, the status command will queue, causing a delay in the return of the status.

```
[admin@xyzcoWK01 (port1/3)]# show status
Waiting for another job to complete
Hostname      : Cat4003
Serial Number: JAE041600WW
Make         : cisco
Model        : WS-C4003
OS Type      : CatOS
OS Version   : 7.6(7)
Uptime       : 3 weeks, 4 days, 5 hours, 47 minutes
```

## Related commands

```
show dashboard
```

# show system authentication

Display RADIUS/TACACS configuration for authentication to the RC Manager. Use the `show authentication` command to display authentication information for devices being managed by the RC Manager.

## Resource

system

## Syntax

```
show system authentication
```

## Usage

Lockout does not occur if Number of invalid attempts before lockout is set to 0.

```
[admin@xyzcoWK01]# show system authentication
Authentication type: local
Use strong passwords: false
Expire password: false
Limit maximum concurrent sessions: false
Number of invalid attempts before lockout: 0
```

## Related commands

```
config system authentication
config authentication
show authentication
```

# show system banner

Displays the current welcome and login banners—lines of text displayed before and immediately after login, respectively.

## Resource

system

## Syntax

```
show system banner
```

## Usage

```
[admin@xyzcoWK01]# show system banner
Welcome Banner:
Successfully logged in to unit xyzcoWK01
```

```
Login Banner:
unit xyzcoWK01
```

## Related commands

```
config system banner
```

# show system email

Displays the RC Manager's current email notification and server settings. These are used to send alert messages to subscribed users.

## Resource

system

## Syntax

```
show system email
```

## Usage

```
[admin@xyzcoWK01]# show system email
In band SMTP Server IP Address: 10.100.2.178
In band FROM address: xyzcowk01@xyzco.us.com
In band SMTP Port: 25
Use user authentication in band: yes
Username: xyzcoWK01
Password: *****
Use SSL encryption: yes
Out of band SMTP Server IP Address: 4.183.2.201
Out of band FROM address: xyzcowk01@xyzco.us.com
Out of band SMTP Port: 25
Use user authentication out of band: yes
Username: xyzcoWK01
Password: *****
Use SSL encryption: yes
```

## Related commands

```
config system email
```

# show system ip

Displays the RC Manager's current management address, Ethernet speed, and hostname.

## Resource

system

## Syntax

```
show system ip
```

## Usage

```
[admin@xyzcoWK01]# show system ip
Use DHCP: No
Management IP: 172.30.238.102
Host Name: xyzcoWK01
Subnet Mask: 255.255.255.0
Broadcast Address: 172.30.238.255
Default Route: 172.30.238.254
Speed/duplex: auto:100full
DNS Server: 172.30.235.9
MAC Address: 00:0F:2C:00:02:BF
```

## Related commands

```
config system ip
```

# show system keypad

Displays the status of the keypad on the front of the RC Manager.

## Resource

system

## Syntax

```
show system keypad
```

## Usage

```
[admin@xyzcoWK01]# show system keypad  
Keypad Configuration: enabled
```

## Related commands

```
config system keypad
```

# show system ntp

Displays the RC Manager's network time protocol configuration.

## Resource

system

## Syntax

```
show system ntp [verbose]
```

To view detailed statistics about NTP transactions, use the optional **verbose** parameter.

## Usage

```
[admin@xyzcoWK01]# show system ntp  
Use NTP: yes  
NTP Primary Server Hostname or IP: 172.30.238.18  
NTP Secondary Server Hostname or IP: null
```

```
[admin@xyzcoWK01]# show system ntp verbose  
Use NTP: yes  
NTP Primary Server Hostname or IP: 172.30.238.18  
NTP Secondary Server Hostname or IP: null  
      remote          refid      st t when poll reach  delay  offset  
 jitter  
=====
```

remote	refid	st	t	when	poll	reach	delay	offset
*172.30.238.18	172.30.235.254	4	u	84	128	377	0.307	0.659
0.017								

```
==
```

## Related commands

```
config system ntp
```

# show system page-length

Displays the configured page-length setting.

## Resource

system

## Syntax

```
show system page-length
```

## Usage

```
[admin@xyzcoWK01]# show system page-length  
Page length preference is auto.
```

## Related commands

```
page-length  
config system page-length
```

# show system properties

Displays configured name/value pairs for the RC Manager. To display the properties set for a device managed by the RC Manager, use the `show properties` command from the appropriate port resource.

## Resource

system

## Syntax

```
show system properties
```

## Usage

```
[admin@xyzcoWK01]# show system properties  
installDate: 03/26/06
```

## Related commands

```
config system properties  
config properties  
show properties
```

# show system protocols

Displays the RC Manager's inbound connectivity configuration, including Telnet, SSH, IP address filtering, and DHCP base address.

## Resource

system

## Syntax

```
show system protocols [-s]  
-s – displays filter statistics
```

## Usage

Protocol changes take effect after restart. This command shows the current settings; however, if the RC Manager has not been restarted, the settings may not be in effect.

In the example below, two devices have received DHCP addresses. These two addresses are automatically allowed to communicate with the RC Manager.

```
[admin@A101100303]# show system protocols  
Telnet: disabled  
SSH port: 22  
Server DHCP base address: 169.254.100  
allow 169.254.100.10  
allow 169.254.100.14
```

## Related commands

```
config system protocols dhcp  
config system protocols filter  
config system protocols ssh  
config system protocols telnet
```

# show system pulse

Displays the RC Manager's pulse settings. Pulse determines network connectivity by sending packets to an echo host. The RC Manager brings up the dial-up out-of-band network if the pulse fails.

## Resource

system

## Syntax

```
show system pulse
```

## Usage

```
[admin@xyzcoWK01]# show system pulse  
Use Pulse: true  
Pulse Server IP: 172.16.200.103  
Pulse Server Port: 7  
Dial Out when pulse fails: yes
```

## Related commands

```
config system pulse
```

# show system serial

Shows whether the RC Manager's console port is configured for null-modem operation. To display a connected device's serial console settings, use the `show serial` command.

## Resource

system

## Syntax

```
show system serial
```

## Usage

```
[admin@xyzcoWK01]# show system serial  
Null modem: no
```

## Related commands

```
config system serial  
config serial  
show serial
```

# show system snmp

Command to display current SNMP information.

## Resource

system

## Syntax

```
show system snmp
```

## Usage

```
[admin@xyzcoWK01]# show system snmp  
Security Level: authPriv  
Port: 161  
Username: xyzcoWK01  
Auth Protocol: SHA  
Auth Password: *****  
Priv Protocol: AES256  
Priv Password: *****
```

## Related commands

```
config system snmp
```

# show system syslog-options

Displays the parameters used to send the RC Manager's own logs to a Syslog server.

## Resource

system

## Syntax

```
show system syslog-options
```

## Usage

```
[admin@xyzcoWK01]# show system syslog-options
Syslog enabled: yes
Syslog server IP: 172.30.235.91
Syslog port number: 514
Syslog facility: local5
```

## Related commands

```
config system syslog-options
```

# show system timeout

Displays the idle connection session timeout value for the RC Manager.

## Resource

system

## Syntax

```
show system timeout
```

## Usage

```
[admin@xyzcoWK01]# show system timeout
Current session timeout is 5 minutes.
```

## Related commands

```
config system timeout
```



# show tech

Displays the result of the specified `pull tech` operation. This file provides details about the device that are helpful to technical support personnel in resolving any issues that may arise. Rules can be defined to include this operation using the `showTech` action.

## Resource

port

## Makes for which this command is available

Alcatel, Cisco, Netscreen

## Syntax

```
show tech [current | previous | archive #]
```

## Usage

This command only executes if the specified tech file exists. Otherwise, the CLI returns this message:

```
[admin@xyzcoWK01 (port1/2)]# show tech
File does not exist. Run 'Pull Tech'
```

```
[admin@xyzcoWK01 (port1/2)]# show tech
----- show version -----
Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-C3H2S-M), Version 12.0(5)WC2b, RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2002 by cisco Systems, Inc.
Compiled Fri 15-Feb-02 10:49 by devgoyal
Image text-base: 0x80010000, data-base: 0x8031E000
ROM: Bootstrap program is CALHOUN boot loader
WK-DMZ uptime is 3 weeks, 4 days, 5 hours, 51 minutes
System returned to ROM by power-on
System image file is "flash:c2950-c3h2s-mz.120-5.WC2b.bin"
cisco WS-C2950-24 (RC32300) processor (revision B0) with 22249K bytes of
memory.
Processor board ID FAB0551P1UH
Last reset from system-reset
---Press 'q' to quit, any other key to continue--- [1/50]
--output removed--
```

## Related commands

`pull tech`

# show user

Displays information from the local user database.

## Resource

system

## Syntax

```
show user <"userID" | *>
```

## Usage

Using **\*** instead of a specific userID lists all users.

```
[admin@xyzcoWK01]# show user adent
adent
created 05/29/2007 21:30:10 UTC
description security, SW ops
start 2007-05-15 21:26:28.0
end 2007-12-31 21:26:33.0
Active from 05/15/07-21:26:28 to 12/31/07-21:26:33
password $sha1$MaQTLZ1SJQ7X$oNlWKPkipfy8GFY04h0jaE3jg4w=
alert frequency 10m
alert eligible * * * * *
timezone US/Central dst
email adent@xyzco.biz
powercontrol - security
modem - security
system - security
port1/1 - security
port1/2 - security
port1/3 - security
port1/4 - security
```

**Administration > Users**—universally available

## Related commands

`config user`

# show version

Displays the software version number, serial number, and other information. Also displays the serial numbers of installed option cards or expansion modules.

## Resource

system

## Syntax

`show version`

## Usage

```
[admin@xyzcoWK01]# show version
RC Manager Serial Number: A210210014
RC Manager v3.4 build 20080206:2346
OS version: 3.4.0.12436
Last boot: 02/07/08-15:48:12
Last incremental restart: 02/07/08-15:52:24
Slot 1 serial number: 0736299323
Interposer serial number: 0746262199
```

## Related commands

—

# show vpn

Displays the RC Manager's VPN configuration.

## Resource

modem

## Syntax

**show vpn**

## Usage

```
[admin@xyzcoWK01 (modem)]# show vpn
VPN type: pptp
User Name: xyzcoWK01
Pptp server ip: 66.193.254.226
MPPE required: yes
40 bit encryption refused: yes
128 bit encryption refused: yes
Stateless encryption refused: yes
```

## Related commands

**config vpn**

# show who

Displays the currently logged-in users, their login times, and their IP addresses.

## Resource

system

## Syntax

**show who**

## Usage

```
[admin@xyzcoWK01]# show who
tmcmillan      ssh      Dec 06 16:44      (4.33.122.1)
admin          telnet   Dec 06 18:20      (156.38.24.102)
adent          ssh      Dec 06 18:23      (172.30.235.254)
pvjeltz        console  Dec 06 19:08
```

## Related commands

**show session**

**show sessions**

# show xbrowser

Displays the TCP port and protocol currently used by xbrowser.

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp, server, tcp

## Syntax

```
show xbrowser
```

## Usage

```
[admin@A101100303 (port1/3)]# show xbrowser
--- Existing Values ---
Browser port: 443
Browser protocol: https
```

## Related commands

```
config xbrowser
xbrowser
```

# shutdown

Shuts down the RC Manager.

## Resource

system

## Syntax

```
shutdown
```

## Usage

This command cannot be abbreviated. You must enter the entire command.

```
[admin@xyzcoWK01]# shutdown
** If you shutdown the RC Manager, you will have to manually repower it. **
Are you sure you want to shutdown? (y/n) [n]: y
Checking devices...
Shutting Down.
```

## Related commands

```
reboot
restart
```

# suspend

Suspends automatic interaction processes, including rules engine, automated jobs, automated recovery procedures, and (from the `system` context) heartbeat.

## Resource

system, modem, port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp, server, tcp

## Syntax

System: `suspend < off | on > [-duration {0..120}]`

Modem, Port: `suspend < off | all | automated | recovery > [-duration {0..120}]`

**all**—Suspends all data collection and automated processes for the port.

**automated**—Suspends all but recovery-oriented processes such as configuration rollback and ROMmon detection.

**recovery**—Suspends only automated recovery and config rollback. Data collection and alerting will continue

**-duration**—Set the suspend duration in minutes. Default is 60 minutes.

## Usage

```
[tmcmillan@xyzcoWK01]# suspend  
RC Manager automated operations suspended for 60 minutes
```

```
[admin@xyzcoWK01 (port1)]# suspend recovery -duration 100  
port1 is suspended for 100 minutes.  
All recovery operations are suspended: rommon, config recovery, etc.  
Terminal pass-through configuration rollback is suspended.
```

```
[tmcmillan@xyzcoWK01 (port1/1)]# suspend  
port1/1 is suspended for 60 minutes.  
All scheduled jobs are suspended. Log collection is suspended.
```

To resume normal operations before the suspend command times out, use the suspend command with a very short duration—for example, `suspend -duration 1` causes normal operation to resume after one minute.

## Related commands

—

# terminal

Provides direct access to the console port of the device. The default preference is to snapshot the operational (running) configuration for transactional rollback.

## Resource

modem, port, powercontrol

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, native, server, tcp

## Syntax

`terminal`

## Subcommands

While using the terminal pass-through application, the following commands are available to provide additional functionality:

`~a`—Authentication wizard

`~b`—Send break signal

`~c`—Incremental commit

`~e`—Turn on local echo (on by default for ComTech devices)

`~f`—Start or stop the FTP server

`~h`—Show this help menu

`~l`—Lock this port—other users and jobs will be ignored. The user who locks the port can term back in unhindered; the session resumes where the user left off. A user with the `terminal force` permission can term in to a locked port.

`~n`—Append newlines to carriage returns (on by default for ComTech devices)

`~p`—Apply power to/remove power from/cycle power to this device

`~q`—Send Solaris alternate break signal.

`~r`—Rollback wizard

`~s`—Serial connection settings wizard

`~t`—TFTP server wizard

`~x`—Xmodem wizard

`~` —Exit Terminal

Availability of commands is determined by the user's authorization.

## Usage

If the terminal is in use, the RC Manager returns the message

```
Terminal pass-through is in use. Press 'x' to exit, 'f' to force break
```

If your role has the terminal shadow authority, you can view current terminal activity by entering **s**.

Exit the shadow using the standard `~` command. If the primary terminal user exits, the shadow user's prompt will return to the CLI.

The terminal pass-through feature blocks the RC Manager's automated processes while active. It times out in five minutes to allow automated processes to continue.

The transactional configuration rollback automatically generates a rollback document that is applied within 90 seconds after the commit option is ignored. During the countdown to rollback, the RC Manager sends the ASCII bell character each time it refreshes the countdown display, to provide an audible cue that rollback is about to start.

Scheduled jobs that are already executing will complete before pass-through starts, signaled by:

```
Process is executing. Please wait or press 'x' to exit.
```

To exit pass-through mode, press the tilde character `~` and the enter key.

When you end your session, you will be prompted to enter a comment describing the reason for your changes. The information you enter will be available as part of the data returned by the **show device changes** command.

```
[admin@xyzcoWK01]# terminal
Press ~[ENTER] to exit
Connecting ...
Process is executing. Please wait or press 'x' to exit.
Retrieving running-config from device ...
Complete. running-config pulled.
Console session started.
DMZ-2948#
DMZ-2948#
You have been idle for 150 seconds. Your session will end in another 150
seconds.
You have been idle for 300 seconds, your session is ending.
Disconnecting ...
Retrieving running-config from device ...
Complete. running-config pulled.
```

## Related commands

—

# xbrowser

For devices with graphical user interfaces, the RC Manager provides xbrowser, a browser-based device management capability similar to a KVM switch.

Prerequisites for using this feature:

- You must have an XServer client installed on your computer
- You must use an SSH client that supports X11 forwarding
- The device must be configured with a dedicated Ethernet port

## Resource

port

## Makes for which this command is available

3Com, Alcatel, Cisco, Comtech, Garmin, HP, iDirect, Juniper, ND Satcom, Netscreen, Nortel, Sun, Tasman, TippingPoint, ppp, server, tcp

## Syntax

**xbrowser**

## Usage

```
[admin@A101100303 (port1/3)]# xbrowser  
initializing browser for first time
```

## Related commands

**config xbrowser**



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Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference. The user will bear sole responsibility for correcting such interference.

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*Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.*

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