

1 Key Commands

Command	Function
accept-lifetime	Configure the accept-lifetime.
key	Configure a key in the key chain.
key chain	Configure a key chain, and enter the key chain configuration mode.
key-string	Configure a key string in the key configuration mode of the key chain.
send-lifetime	Configure the send-lifetime.
show key chain	Display the key chain configurations.

1.1 accept-lifetime

Function

Run the **accept-lifetime** command to configure the accept-lifetime.

Run the **no** form of this command to remove this configuration.

By default, the accept-lifetime of a key chain is disabled.

Syntax

```
accept-lifetime start-time { infinite | end-time | duration duration-time }
```

```
no accept-lifetime
```

Parameter Description

start-time: Start time of the lifetime.

infinite: Specifies that the key is always effective from the start time.

end-time: End time of the lifetime, which must be later than *start-time*.

duration *duration-time*: Specifies the duration of the lifetime starting from *start-time* in seconds. The range is from 1 to 2147483646.

Command Modes

Key configuration mode of the key chain

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures the key chain **kc**, and enters the key chain configuration mode. The example also configures the key **1**, enters the key **1** configuration mode, and defines the accept-lifetime of the key chain.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# key chain kc
Hostname(config-keychain)# key 1
Hostname(config-keychain-key)# key-string Hello
Hostname(config-keychain-key)# accept-lifetime 16:30:00 Oct 1 2010 duration 43200
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [key](#)
- [key chain](#)

1.2 key

Function

Run the **key** command to configure a key in the key chain.

Run the **no** form of this command to remove this configuration.

By default, no key is configured.

Syntax

key *key-id*

no key *key-id*

Parameter Description

key-id: ID of the authentication key in the key chain. The value range is from 0 to 2147483647.

Command Modes

Key chain configuration mode.

Default Level

14

Usage Guidelines

After the key is configured, it must meet two conditions before it takes effect: (1) the key-string is configured; (2) the key is in the lifetime (send-lifetime and accept-lifetime). If the lifetime is not configured, the key is considered effective permanently once the key-string is configured. Two effective states are defined: effective on the sending end and effective on the receiving end. The two states correspond to send-lifetime and accept-lifetime respectively.

If there is no special demand, you can configure a key by incrementing the key-id to avoid the authentication state oscillation caused by the possible changes of effective keys. If multiple effective keys exist, each routing protocol uses the key with the smallest key-id.

In the TCP enhanced authentication scenario, the key-id ranges from 0 to 63.

Examples

The following example configures the key chain **ripkeys**, enters the key chain configuration mode, and configures the key 1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# key chain ripkeys
Hostname(config-keychain)# key 1
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [key chain](#)
- [key-string](#)

1.3 key chain

Function

Run the **key chain** command to configure a key chain, and enter the key chain configuration mode.

Run the **no** form of this chain command to remove this configuration.

By default, no key chain is configured.

Syntax

key chain *key-chain-name*

no key chain *key-chain-name*

Parameter Description

key-chain-name: Name of the key chain.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

To make a key chain take effect, you must configure at least one key.

Examples

The following example configures the key chain **ripkeys**, and enters the key chain configuration mode.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# key chain ripkeys
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [key](#)
- [key-string](#)

1.4 key-string

Function

Run the **key-string** command to configure a key string in the key configuration mode of the key chain.

Run the **no** form of this command to remove this configuration.

By default, no key string is configured.

Syntax

key-string [0 | 7] *string-text*

no key-string

Parameter Description

0: Specifies that the key is displayed in plaintext.

7: Specifies that the key is displayed in ciphertext.

string-text: key string. The plaintext key contains less than 80 characters; the ciphertext key contains less than 162 characters. The configured ciphertext parameter should be an even number of hexadecimal numbers (0-f). When the **service password-encryption** command is configured to enable the encryption service, the plaintext key is converted into a ciphertext key once the following condition is met: the ciphertext corresponding to the plaintext password is an even number of hexadecimal numbers and does not carry non-printable characters.

Command Modes

Key configuration mode of the key chain

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures the key chain **ripkeys**, enters the key chain configuration mode, configures the key **1**, enters the key **1** configuration mode, and sets the key string to **abc**.

```
Hostname> enable
```

```
Hostname# configure terminal
Hostname(config)# key chain ripkeys
Hostname(config-keychain)# key 1
Hostname(config-keychain-key)# key-string abc
```

Notifications

When the configured plaintext key contains more than 80 characters or the ciphertext key contains more than 162 characters, the following error prompt will be displayed:

```
%Error: key string too long
```

When the configured ciphertext key such as **key-string 7 123** does not meet the encryption rule, the following error prompt will be displayed:

```
% Invalid encrypted password: 123
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [key](#)
- [key chain](#)

1.5 send-lifetime

Function

Run the **send-lifetime** command to configure the send-lifetime.

Run the **no** form of this command to remove this configuration.

By default, the send-lifetime of a key chain is disabled.

Syntax

```
send-lifetime start-time { infinite | end-time | duration duration-time }
```

```
no send-lifetime
```

Parameter Description

start-time: Start time of the lifetime.

infinite: Specifies that the key is always effective from the start time.

end-time: End time of the lifetime, which must be later than *start-time*.

duration *duration-time*: Specifies the duration of the lifetime starting from *start-time* in seconds. The value range is from 1 to 2147483646.

Command Modes

Key configuration mode of the key chain

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures the key chain **kc**, enters the key chain configuration mode, configures the key **1**, enters the key **1** configuration mode, and sets the send-lifetime of the key chain to 43,200 seconds starting from 16:30:00 Oct 1 2010.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# key chain kc
Hostname(config-keychain)# key 1
Hostname(config-keychain-key)# key-string World
Hostname(config-keychain-key)# send-lifetime 16:30:00 Oct 1 2010 duration 43200
```

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.6 show key chain

Function

Run the **show key chain** command to display the key chain configurations.

Syntax

```
show key chain [ keychain-name ]
```

Parameter Description

keychain-name: Configurations of the specified key chain.

Command Modes

All modes except the user EXEC mode

Default Level

14

Usage Guidelines

If no key chain name is specified, the configurations of all key chains are displayed. Otherwise, only configurations of the specified key chain are displayed.

Examples

The following example displays the information of all key chains.

```
Hostname(config)#show key chain
key chain kc
  key 1 -- text "Hostname"
    accept-lifetime (12:11:00 May  2 2001) - (infinite)
    send-lifetime (always valid) - (always valid) [valid now]
```

Table 1-1Output Fields of the show key chain Command

Field	Description
key chain	Name of the key chain
key	ID and string of the key
accept-lifetime	Lifetime of a key in the receiving direction
send-lifetime	Lifetime of a key in the sending direction

Notifications

N/A

Platform Description

N/A

Related Commands

N/A