WEB ٦ Ᵽ

RG-RSR10-01G-E,810 ٦ ص ܻ

RGOS 10.4(3b48)

◌ V2.0

un

RGOS 10.4 (3b48)

http://www.ruijie.com.cn/

http://webchat.ruijie.com.cn

http://www.ruijie.com.cn/service.aspx

7 × 24 4008-111-000

http://bbs.ruijie.com.cn/portal.php

service@ruijie.com.cn

1)

[]　　[]

{x|y|…}

1 WEB

1.1

RSR810 RSR10-01G-E

1.1.1

WEB IE Firefox Chrome

WEB WEB

˜ ᑕ ₱

WEB ɺ ᒣ ꞁ WEB ╞ ɳ ˋ ẹ ф ꜝ ٻص WEB ᒣ ת ף ͅ Ḿ ф ꜝ فΦ ᒣ ת

╞ ɳ ˜Ḥ'Y ἰ ȝ IE ♀ Firefox ط₵ Chrome ' Safari ɥ ᵍ IE ⁄ ╞ ɳ (ḅ ▫ Maxton) ꞁ Ḝ ╞ ɳ ˋ ẹ WEB ᒣ ת Ḣ ἵ א ˛ ᾰ ἳ Ȁ ڇ ئ ᒉ ầ Ẃ

ٻ ' ٻ ' ф ɺ ɻ ɭ ⁞ Ώ PC Ĭ˜ ᶻ ɳ ͬ ˛ ḧ ˝ ٻ Ĭ˜ ấ ɲ ٻ ' ф ɺ 1280*1024 ᾰ Ḵ Ṝ Ĭ ˜ ấ ɲ ٻ ' ф ɺ ᾰ 1440*900 % ٻ ' ╞ ɳ WEB ῲ ' ῳ Ḝ ٻ ' ἵ א ῭ ͅ Ḿش ᶼ ɥ ᒉ ầ Ẃ

1.2.2 ᕱ ᒉ ᒥ ᕱ

ƛ ừ ,ت ᑊ WEB Ὸ ἵ ῑ Ȁ ꜛ ȭ ф ꜝ ᒣ ת ὶ ῑ GE0/0 ὶ Ἰ ὶ IP 192.168.1.1 Ḓ ɺ ó 255.255.255.0 WEB ᒣ ת ن Ἁ admin Ḻ admin ᾰ Ṅ س ɑ ب ɺ ᒍ ɺ ᕱ ф ɺ ℓ ح Windows XP

WEB ᒍ ה ف ᕱ

ἵ ⸗ ớ	ƛ
WEB Ὸ ꜛ ȭ	Ȁ
WEB ᒣ ת ὶ	GE0/0 ᾰ VLAN1 ᒣ ת IP 192.168.1.1
WEB ᒣ ת ن Ἁ	ꞁ Ἁ admin Ḻ admin ꞁ Ἁ guest Ḻ guest

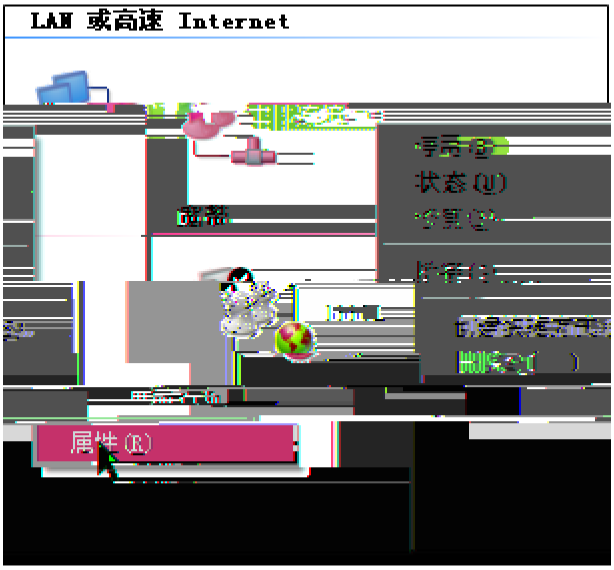
ᑊ RSR810 RSR10-01G-E ф ꜝ ≡ ῶ Ṗ ᶿ ὶ ꜟ % RSR810 RSR10-01G-E ф ꜝ ᒣ ת ὶ VLAN 1 ɺ ᒧ ὶ Ṗ Ώ ῄ ɰ ڏ ф ꜝ WEB ᒣ ת ᒍ ᕱ

ℓ ح ˛ ɑ ḭ Ἁ ᒉ PC ت ᑊ Ṯ ɔ ꞁ ɺ ᒧ Ṅ ḭ Ἁ ᒉ PC ɺ ت ᑊ GE0/0 ف ὶ ڲ ف ὶ ᾰ ф ꜝ ᒣ ת ὶ ꜛ ȭ ˝Y˜ ♂ ᶑ ᾰ ᕱ ᵖ ڲ ˝Y˜ ♂ ≡ ῶ ᵖ ἵ ῑ ɺ ᒧ ᾰ ḭ Ἁ ᒉ PC ɺ א ῲ ڴ

ℓ ح ф ɺ ḭ Ἁ ᒉ PC IP ş ӿ Ḥ ℓ ح ḅ

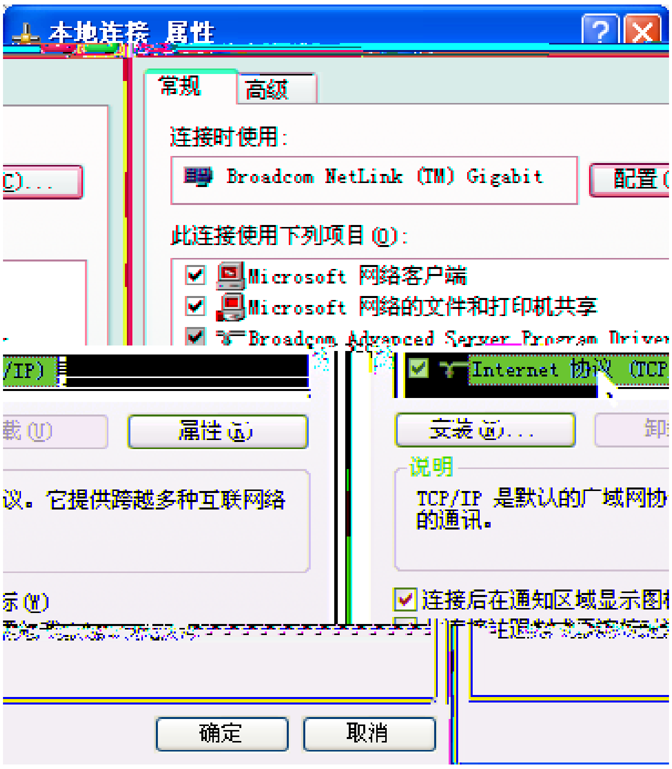
Ṅش‰ ᒉ₆ PC ṫ ư ᵖ " Ȁ Ḋ " -> " í ͅ — " -> " ɺ ᕱ Internet ف ὶ " -> " ɺ ᕱ ف ὶ " ḅ ꞡ

ꞡ 1-1



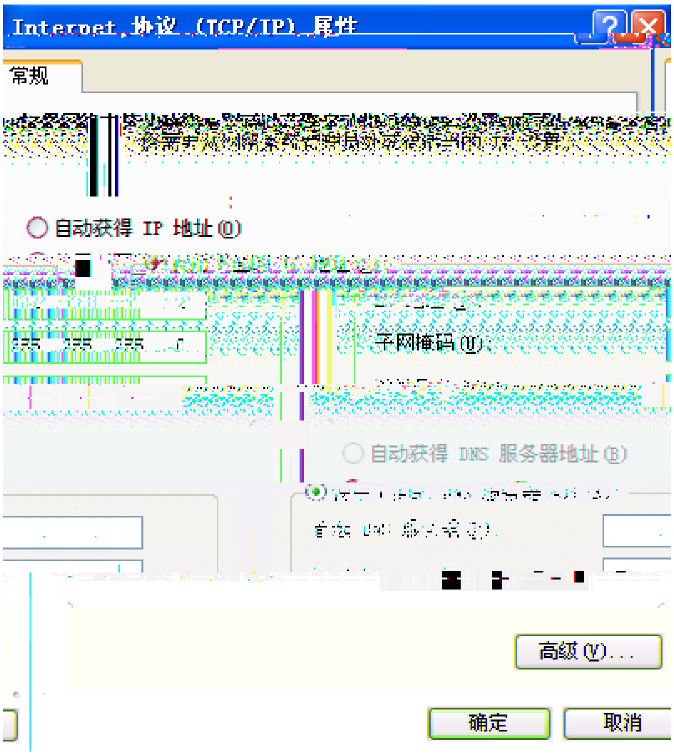
" Internet TCP/IP "

1-2



PC IP

" Internet TCP/IP " IP " IP " 192.168.1.xxx xxx 2 254 " " 255.255.255.0 " " 192.1F10 91 10422.



ꟷ ت ꟷ ￼س ŋ IP ʂ χ 192.168.1.1 ꜝ % į ʺA ˧ PC ￼ IP ʂ χ ώ ỉ 1, “. ћ ” Ḣ ặ لب ل

PC

Ṅ ش‰ ꟸ₆ PC￼ ṫ ư “ Ȁ Ḋ ” -> “ ظ Φ ” -> ڃ “ cmd ” ->ʺ ћ ”

ʠ ώ˜ ꟷ ʔ ping ╜ ؛ ĩ ق ڽ ʺE Φ ping 192.168.1.1 ḅ ' Ï ˜

ǥ 1-4 ق ì ӑ

```
Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
```

ǥ 1-5 ق ì ¸ م

```
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

ﻻ ف ا ، م 5ٲ

ث ٩ — ị ΆΆ ﾍ PC ف ﾍ Y˜ ♂ ĩ ٧ Y˜ ♂ ' ˜ ꜔ ת ف ì * Ẃ Ώ ⁝ ﻟ ﺃ

5ٲ ك TCP/IP ф ﻟ ĩ * .

5ٲ ث ٩ ĩ Ṯ ﻟ ɔ

1.2.3 ﬂ WEB ﾍ ﾍ

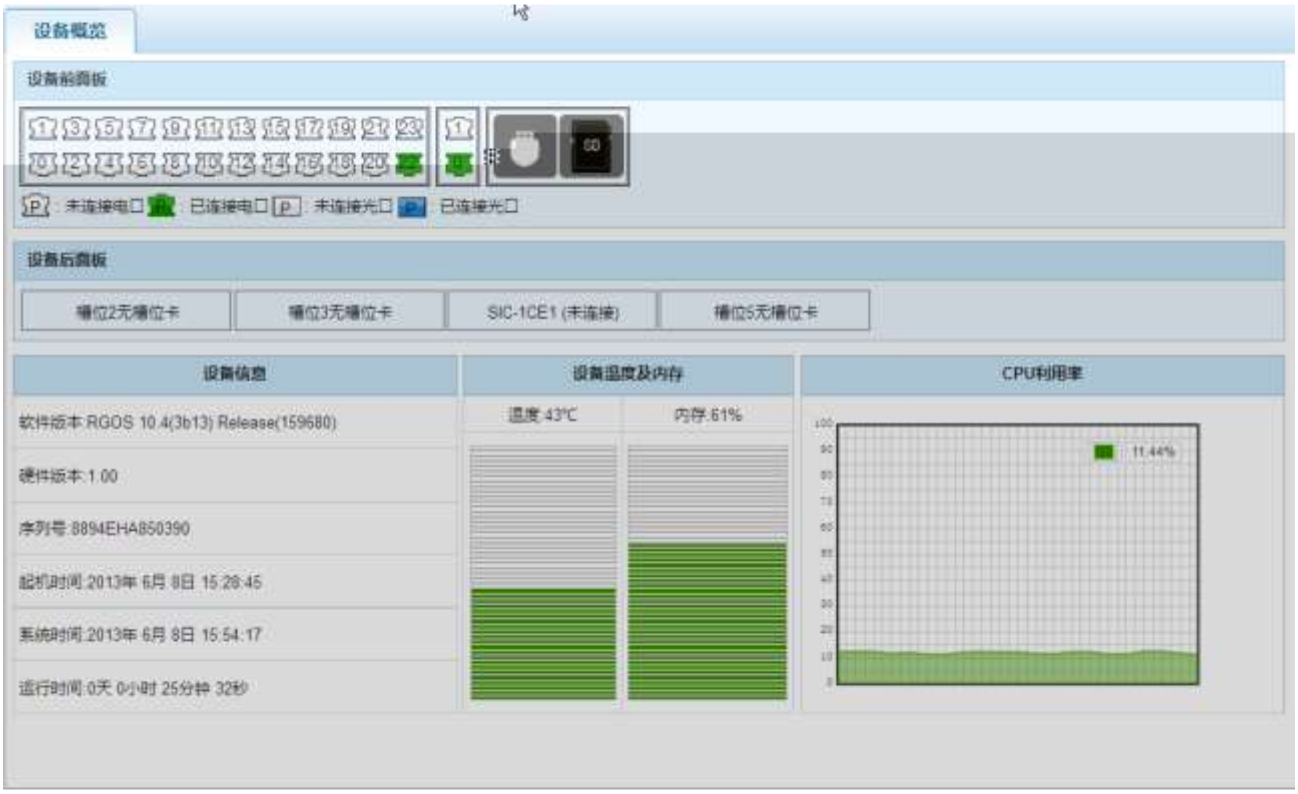
ᵽ ф ៖ WEB

1.2.4 WEB

1.2.4.1

RSR WEB

1-8 WEB



ټ ꜝ ҉ ꜞ ѿ ì USB ҉ ꜞ ᾰ ǭ SD ῾H ҉ ꜞ ₦ η ҭ ͅ έ Ĭ ˜ USB SD ǥ ‰ Ĭ ˜

1.3.2 ᩋ ᩆ ڧ ᩋ

ٻ ڝ ᡁ ᩋ ưђ ҉ ꜞ ڗ ᵍ ٻ ΄ ὑ ȉ ᡁ ì ṕ ᶟ ᡁ ưђ Ḿ ȉ ᡁ ì ˄ ᩆ Ά Ᾰ ꞁ ὑ ADSL ì DHCP ȭ IP ȿ ӽ ì ɖ ḧ ᡁ IP ȿ ӽ ì ȉ ٻ ᩆ ɔ 3G ᡁ ᩋ ì ℓ CE1 ᡔ ᡁ ᩋ ì Ά Ᾰ Ḿ ṕ ᶟ ᡁ ưђ ḫ ℵ Ḿ ṕ ᶟ ᡁ ڦ Φ ȭ IP ȿ ӽ ٻ VLAN ݣ VLAN ڗ ȉ ٻ

1.3.2.1 VLAN ᩆ Ᵽ

VLAN ᩆ Ᵽ

VLAN ȋ Ꮭ Ό ṕ ᶟ ᡁ Virtual Local Area Network ᩅ ᡔ ȋ ˝Y Ṅ ᾰ ˄ Ṗ ῞Ω ˝Y ḧ VLAN ᾰ ῎Α ѿ ڧ ì ڧ ᩆ ᩋ ᩆ ҉ ꜞ ᩋ ᾰ Ꮭ Ό ᡁ ᩋ ḫ ℵ ٻ

ǥ 1-10

1.3.2.2 ٨

ٻص ɖ ᶿ ì ﻟﺐ ẖ א ᵍ ῼΩ چ ẖ א ȍ ﻫ ì ĭ ﻟ ì ĭ ﻟ Ά Ã ῶ PPPOE(ADSL)῎O DHCP Ά Ã ظ ʅ n IP ȿ ӽ ᾰ ᾶ ɖ ӥ ﻟ IP ȿ ӽ Ά Ã ì ì Ά Ã ت Ī ﻟ ٨ ῎O Ẕ

PPPoE ADSL ῎O ì PPPoE(ADSL)῎O Ά Ã ì ﺔ ɭ ظ ʅ ʃ n ű Ḻ

DHCP Ά Ã ì ΄ ì ǰ DHCP Ά Ã ì ٻص DHCP ɲ ᶿ ì ₅ ظ ʅ ʃ n ﻟ IP ȿ ӽ

ɖ ӥ ﻟ ȿ ӽ ì ɖ ӥ ﻟ ȿ ӽ ì ﺔ ɭ ظ ʅ ʃ n ì ﻟ ȿ ӽ ﺳ ɒ ﻟ ȿ ӽ

PPPoE ADSL ῎O DHCP ɖ ӥ ﻟ ȿ ӽ ì ĭ ﻟ ﺔ ɭ ἑ ῎Y ӥ ﺳ ɒ ت ﻟ ٨ ȿ ӽ چ ῎Ω h

ჹ 1-11

ǰ῎O " ῭ õ IP ȿ ӽ " ﻟ ȿ ӽ ì ΄ ì ₭ ڗ ﻟ IP ﻟ ٨ ọ ǰ῎O " õ IP ȿ ӽ ì " DHCP Ά Ã ì ΄ ì ǰ῎O ǰ῎O " PPPoE(ADSL) " ADSL Ά Ã ì ɭ ڗ Ẕ ώ ﺇ ῎A Ḻ

٨

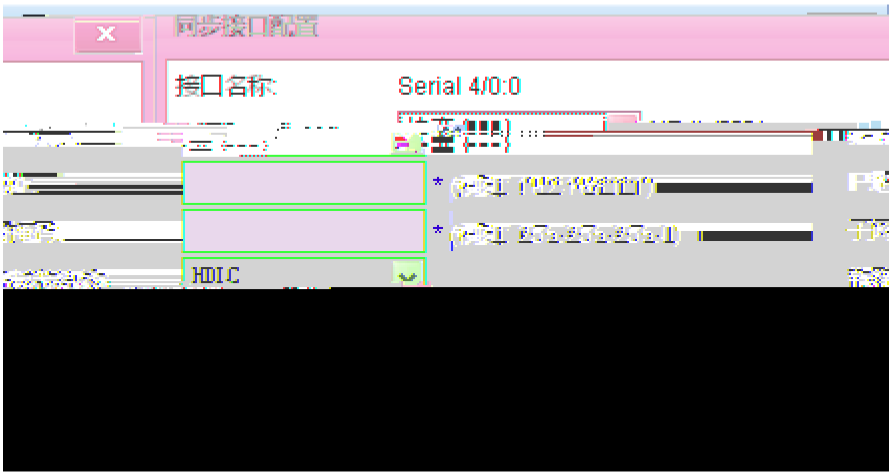
ӿ ³ ﻟ ῎E ṝ ì ɭ ẖ א SIC ﻟ 3G ẖ א ĭ ٻ ﻟ כ 3G ﻟ ٨ ì ℓ CE1 ﻟ ٨ ì Ī ﻟ ‴ ﻟ Rs ẻ Ã Ĭ ˜ ﺋ Rs ῃ ﻟ ɸ ᵗ Ī Rs Ĭ ˜ " ῃ ᾳ " ﺋ ﻟ è ƥ Ĭ ˜ ˀ Ḿ Ẕ ﻟ Ụ Ḝ ش‰ ﻟ ჹ ɑ ῍H ش‰ ჹ ẻ ῳ ᾰ ἑ ʒ ˜ ᵖ ᵖ ჹ ‰ אֽ Ẕ ﻟﺐ ˜ Ḣ ᾰ ٩ ﻟﺐ

CE1 ﻟﺐ:CE1 E1 CE1 ٦ ₩ Ã ﺳ ɒ ὺ Ṫ ₩ Ã ĩ E1 ₩ Ã ǰ῎O E1 ₩ Ã ≡ ῶ ῍H ᵴ ی ﺐ ﻟ Ḣ ᾰ ﻟ ᾰ ℓ Ḏ ì ﻟ ٨ Ṿ Ḵ 2M; ǰ῎O CE1 ₩ Ã ῍H ᵴ ی ف Φ₅ ﻟ ﻟ % ی Ṿ Ḵ ᶾ ɳ ﻟ ӥ ῍H ᵴ ῼ ̧ ῶ ﻟﺐ Ḣ ᾰ ℓ Ḏ ì Ṿ Ḵ ῍H ᵴ ῼ ̧ *64Kbites ℓ ì ῎Ḥ῾Y ῭ õ ﻟﺐ IP PPP IP ٦ n IP Ά Ã

ჹ 1-12

ℓ D̰ ì ã ă ᶈ ì ῼ̈ῼ̃ ́ ￼ ᵽ " ㅅ ث " ̃Yٹ ڤΦḾ ℓ D̰ ì ￼ﺑ ﺪ

g, 1-13



ℓ ﺑ ﺪ: ℓ ì ﺳ ռ ừ Ŗ ᵕ ㅅ ̃Ḥ'Y ̄ ȭ ﺑ ﺪ IP PPP IP Ṫ ₩Ã DTE ῼ̈ῼ̃ ㅅ ㅓ $ ៖
DCE ῼ̈ῼ̃ ﻥ $ ៖ ㅓ ₩Ã ̆ ừ ث ᑊ ṅ ▸ DTE ứ %`H$ ៖ ώ `Hٹ ﺇ ' ق ل ῼ̈ῼ̃￼ گ ă ì ẉ
Ṫ ă DCE ứ `H ọ ء ώ `Hٹ ﺇ ' ق ل ῼ̈ῼ̃￼ ڑ Ṫ

g, 1-14

ş ҳ DHCP n ȭ IP ş ҳ PPPoE ̋O ˰ ǟ SVI ì ọ ؏ ώ̉ Ẕ VLAN ID ڽص " ɖ ̋Ω ì " ݖٮ ̉ Ẕ VLAN ID

PPPoE ADSL ̋O ì PPPoE(ADSL)̋O Ά Ã ì ܣ ˰ ظ ᡪ ʃ n ű ḻ

DHCP Ά Ã ì ˊ ì J̌ DHCP Ά Ã ì ڽص DHCP ŋ SVI ì ₅ ظ ᡪ ʃ n ⅃ IP ş ҳ

ɖ ῦ ⅃ ş ҳ ì ɖ ῦ ⅃ ş ҳ ì ܣ ˰ ظ ᡪ ʃ n ì ￼ ⅃ ş ҳ ܣ ת ⅃ ş ҳ

PPPoE ADSL ̋O DHCP ɖ ῦ ⅃ ş ҳ ì ı̈ ⅃ ܣ ˰ ė ̋Y ῦ ܣ ת ٹ ٕ ⅃ ℳ ş ҳ چ ̋Ω h

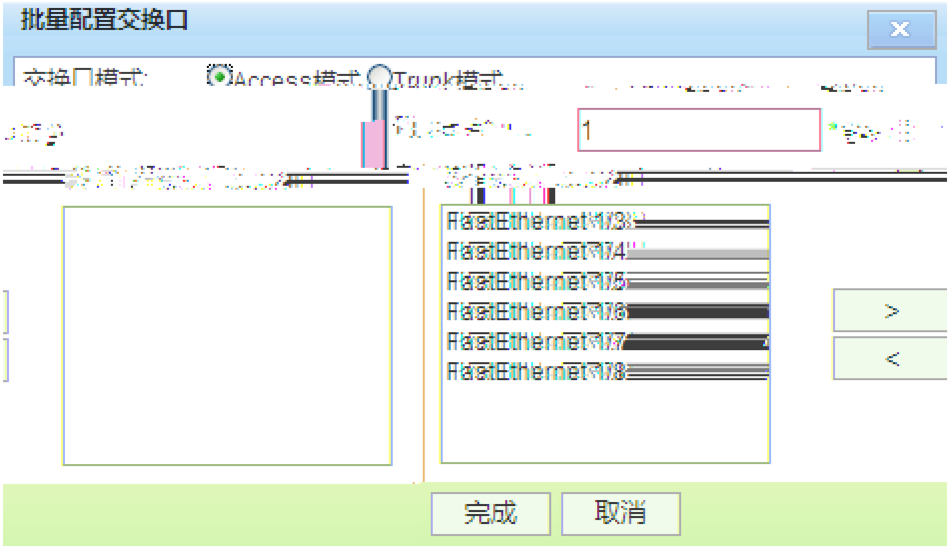
g, 1-16

J̌ ̋O " ˭ ȭ IP ş ҳ " ⅃ ş ҳ ì ˊ ì Ꝁ ڗ ҳ ̏ ì ƾ Ʒ ȭ

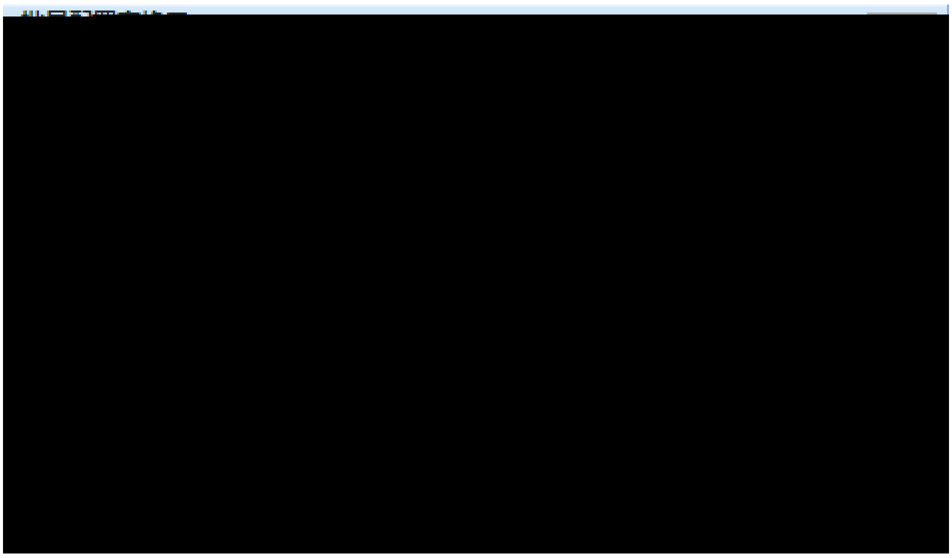
ꝑ ﺐ ﺪ Trunk ῼ ῾H ﹷ ꝑ ﹸ— ￼ ῼ ꞡ‰ ᅱ ẕ ᾰ ▄ Ꝺ ﺔ ﻝ Ὁ ᴴ Access ₩Ã ꝑ Ꝁ Ő ᴴ ᾰ ẕ Ά ῾Ḥ ῾Hﻓὠ " ῃ ﻳ ﺐ ﺪ " " ﻋ ﭺ " " Ὁ ᴴ ﺐ ﺪ " ﻛ ἵ

ῃ ﻳ ﺐ ﺪ ἳ ῎YḾ ﻋ ₩Ã￼ ῼ ₯ ﺪ ꝑ VLAN ꝑ " ῃ ﻳ ﺐ ﺪ " ῎Yﭦ J῎O ﻨ ﻝ ₯ ﺪ￼ ῼ ὶ ₩Ã ڑ ꝑ VLAN ﹹ% ῃ ﻳ ﺐ ﺪ ὠ ῼ ῶ￼ ὶ ₩Ã ﺔ ﻝ ὠ ἵ ﻮﺻ ꝗ ῼ ὶ ὠ₩Ã

ꞡ 1-18 Access ₩Ã



ꞡ 1-19 Trunk ₩Ã

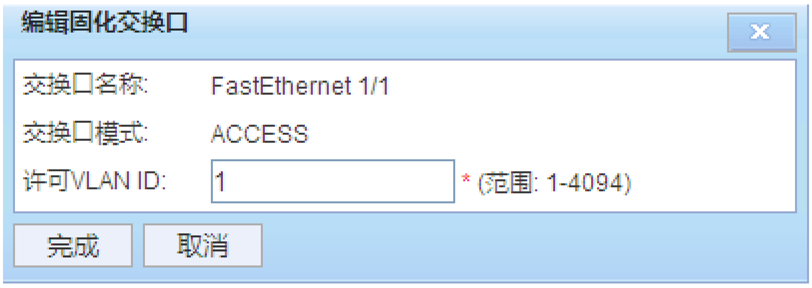


J̌"O Access ₩Ã`H ֆ ꜝ "Ω ˴ ℵ Access ₩Ã "Ω ᾰ Trunk ₩Ã "Ω ℵ

J̌"O Trunk ₩Ã`H ֆ ꜝ "Ω ˴ ℵ Trunk ₩Ã "Ω ᾰ Access ₩Ã "Ω ℵ

ڶ ڗ ĩ "Y ¡ Ḿ "Ω ֆ ڸ ꞵ VLAN ꞓ " ڶ ڗ " ˜Yٹ ڒ ꞵ VLAN ٳ ị "Ω Ṯ ֆ ڸ ص VLAN ˊ ì ꞕu ˝ VLAN

g, 1-20



ﺳ ꞃ ﭗ ڸ ĩ "YÕ ᵘ "Ω ﺳ ꞃ ﭗ ڸ ꞵ Õ ᵘ ﭗ ڸ ص ٳ ٳ VLAN ≡ ῶ ꝗ ﭐ ᾰ SVI ì ꞵ % ص ٳ ꝗ ڽ ꜛ % ẽ ẍ ³ ڸ SVI ì ṕ ³ ڸ SVI ì ˾ — ì ℵ

ᜀ SVI

ٻ ص VLAN ᜀ ꞃ ḫ ℵ VLAN ڗ ٻ "A ῶ ꞵ IP Ḏ ڸ R̲ VLAN VLAN ڗ ٻ g ọ ء ٻ ص Ṗ ì ḫ ℵ VLAN ڗ ٻ ᾰ SVI ì Switch Virtual Interfaces "Ω Ն 'O ì ꜒ ڨ Φ VLAN ڗ IP ٺ ꜝ ڗ VLAN ڗ ٻ ˊ

g, 1-21

ṕ ³ ⅃ SVI ì ⅄ ⌊ ˝Y ḧ ì IP ş ҳ Ḏ ⅃ ọ́

ʯ SVI ì ˝Y ḧ ṕ ³ ⅃ ì ẍ ³ ⅃ SVI ì ₅ ڐ ㄖ Ɨ ì

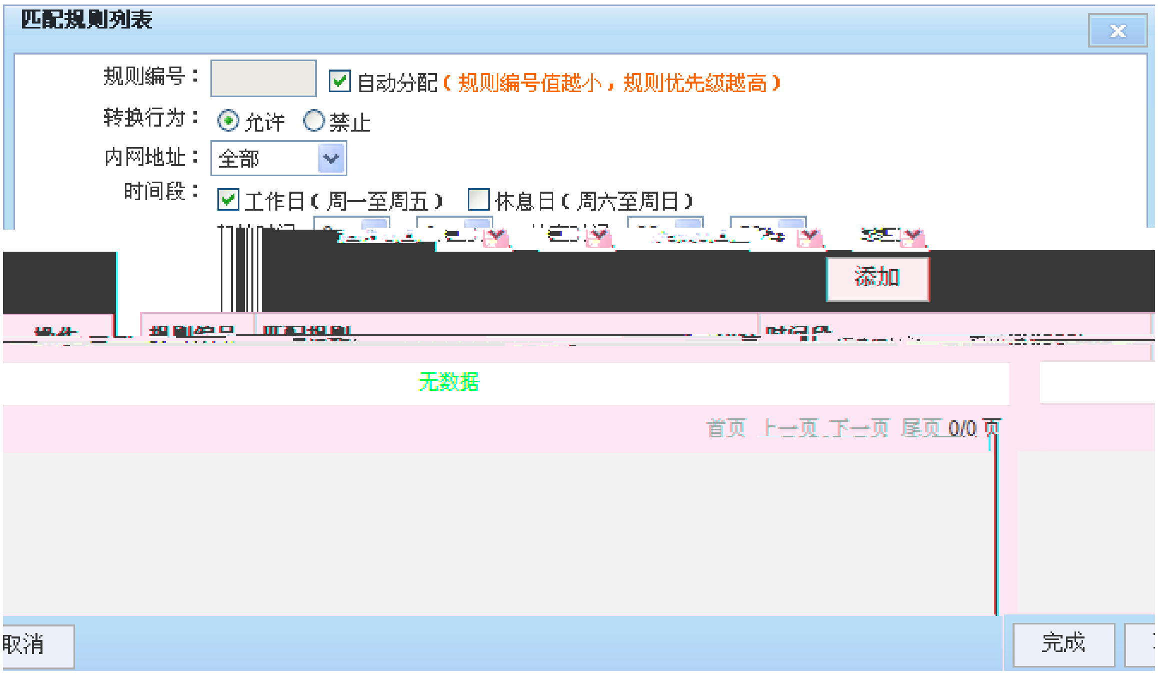
ʯ SVI ì Ḿ Ẕ VLAN ≡ ω̃ ˝Ω ⅃ ḧ ꝑ ▌ٹبـ⅃ ˋH VLAN Ṅ ɋ ٹ Ɨ ⅃ ˵ SVI ꞡ ꓷ Ṅ è ꝑ

ṕ ³ ⅃ SVI ì ⁝ ˝Ω VLAN ID ̥̱ ẑ ṅ ω̦ ^ ĭ́ Ĭ ˜ 18 SVI ì ꞡ‰ ɰ̃ Ĭ ˜

1.3.2.4 NAT ق ⅂

⅂ ⅃ ن

ںٖ ص ⅃ ꟽ ş ҳ ڃ ˝Ω NAT ẖ א ⅃ ˥ ω̃ ş ҳ ڃ ˝Ω ᾰ ∣ ⅃ ş ҳ ẖ א ĭ ⅃ ì NAT ᓗ ᾰ ٢ ĭ " Network Address Translation " " ⅃ ꟽ ş ҳ ڃ ˝Ω " Ḝ ꝑ ˝Ω ‗ ﺕ IP ş ҳ א ꝑ Inm61.5 666B096607A90214A8ansl1l



ש ח ừ p ̈Ά ώ ؍ ʂ ʂ ҁ ̈Ω ؍ ʂ ʂ ҁ ̈Ω ̀H p %̈Y ȟ ҁ ̈Ω ؍ ʂ ҁ

ᔨ ᔦ ˜

p ت ˈ ש ח ф ؍ ẍ ³ ؍ ί ˊ ì ṕ ³ ؍ ̀O ف Ф ῥ Ά ẍ ³ ؍ | ĭ ̈Ά Ա ڏ ʂ ̀O ̀H ɭ ï ṕ ³ ؍ ហ ŋ ت ˈ ώ ؍ ᔨ ʂ ҁ ᔦ ī ṃ ί ث Ȅ ȟ ᵻ ؍ ʂ ҁ ᔦ ī ṃ ṕ ³ ؍ ʂ ̀O ʂ ҁ ᔦ h ɫ ф ȟ ؍ ʂ ҁ ᔦ ώ ̈Ω ̈Ω ῥ ص ī ṃ h ج ᔨ ṕ ³ ؍ ̀O ف ¯ ő ḫ א ṕ ³ ؍ ̀O Ḿ ᵁ ώ ̀O ί ̀H ẽ ṕ ³ ؍ ហ ؍ ᔨ Ḡ

ḡ 1-24 ᔦ ī ṃ

ī ṃ ɨ ʒ ᔦ ī ṃ ǎ ̈Ω ī ṃ

̀O ŋ ت ⁝ ̈Ω ܼ ɭ J̌ ̈O TCP ǎ UDP

ᵁ ؍ IP ẍ ³ ؍ IP ʂ ҁ ƀ ˈ J̌ ̈O ì ᵁ ؍ ì ̈Ά ώ IP ₫u ī ṃ

ᵁ ؍ ᔦ ẍ ³ ؍ ᔦ ƀ 1₆ 65535

؍ IP ɭ ī ṃ ᵁ ؍ ؍ IP ῥ Ẃ ĩ ứ ̀O IP ʂ ҁ

ԁ Ⴗ ˻ ī ṃ ᵁ ԁ￼Ⴗ ᵥᵥ ḅ 1₆ 65535

ḡ 1-25 ῙΏ ī ṃ

ᵁ ԁ IP ẍ ³ ԁ￼IP ȿ ӽ ḅ ʿ ǰ῝O ì ᵁ ԁ ì ῝A ὦ￼IP ʤu ī ṃ

ԁ IP ˻ ī ṃ ᵁ ԁ￼ ԁ IP ụ Ẃ ĩ ứ￼῝O IP ȿ ӽ

1.3.2.5 DHCP

õ ф ԁ ɲ Dynamic Host Configuration Protocol, DHCP ĩ ṕ ³ ԁ￼ԁ Ѧ ɲ DHCP ῝O ṕ ³ ԁ ώ õ IP ȿ ӽ ب ἵ ᵚ ᵩ ب ԁ ˻ ἵ ủ DHCP ἵ õ بIP ȿ ӽ ᷅ õ ԁ ӥ IP ȿ ӽ Ꝺ IP ȿ ӽ ḭ ῝A Ⴗ ῀

DHCP ʎ

DHCP ἵ ḩ ϰ DHCP ῝O Ȁ ᾰ ڈ

ḡ 1-26

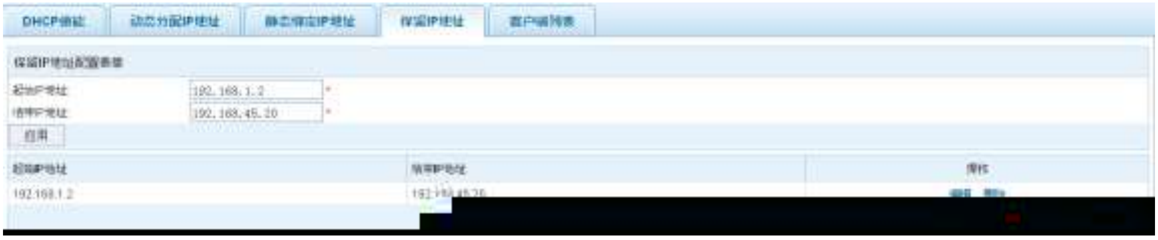
ڧ IP

õ ب IP ȿ ӽ ủ ˻ ب￼ȿ ӽ ԁ ɟ ḭ ῝A Ⴗ ɲ ￼ԁ DNS ȿ ӽ Ⴘ ˻ ب￼ȿ ӽ ԁ ɟ LAN ￼ì ῝Y ԁ ɟ ἵ ȿ ӽ ب ᾰ

ḡ 1-27

ɒ IP ş ҳ ɿ Ḿ • ɺ ɟ IP ş ҳ ᾶ • ≠ ḧ IP ş ҳ ں ٻ ɒ IP ş ҳ ἶ ɋ ɿ ɺ ʌ ʉ̄ Ḝ ȸ ȶ IP ş ҳ ȸ ɺ

ɡ 1-29



ү Ḋ IP ş ҳ ɋ ɒ ү Ḋ IP ş ҳ

ɹ IP ş ҳ ɋ ɒ ɹ IP ş ҳ

ү Ḋ IP ş ҳ ɹ IP ş ҳ̓ ὴ ἳ Ḿ ≠ ḧ IP ş ҳ ں ٻ

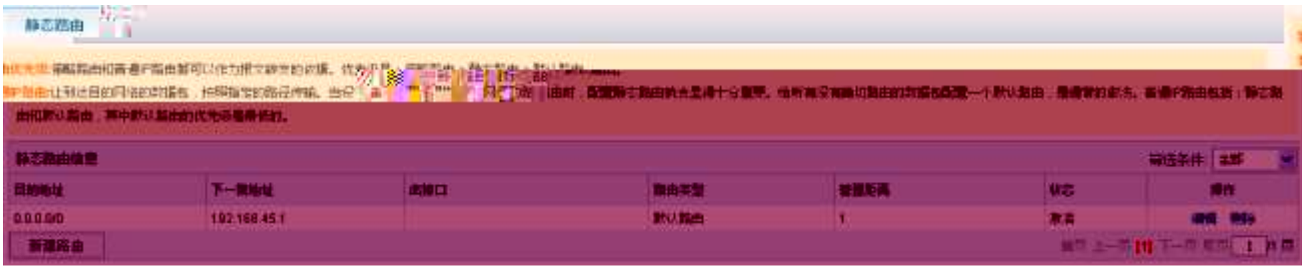
1.3.3 ص ŀ ق ꟷ

1.3.3.1 ک ص ŀ

ت ׀ ĩ ǰ ̈O ɫ ῳ ت Ể ̈H ̈Ω̣ ̆Ω ◊ ʂ ᵖ ݣ ΄ ʂ ᵖ Φ ؎ ȭ ت ׀ ĩ ׀ ɺ ʎ ˥ ת ἐ ب ɺ ˥ ؏ e ت ׀ ῶ ʬ ݤ ῷ ˎ ʬ ᵖ

؎ ȭ ت ׀ ᵹ ΄ ɺ ʎ ö ἔ ῳ ᾰ̈5 ^ ɀ ɺ ʎ h ₩ ݧ ṇ ö ἔ ɺ ̲ ɖ ḧ ɺ ʎ Ḝ ɺ ʎ ö ἔ ɺ ̲ ᾰ̆ ج ت ˄ ȭ ׀ ̀H ɺ ʎ ˥ ת ؍ ɭ ἐ ῳ ت ׀ ΄ ̉ ؎ ȭ ت ׀ Ụ

ꞡ 1-21



؎ ȭ ت ׀ h

΄ ʂ ᶍ ΄ æ

´ ￼ş ӽ ´ ￼ọ	0.0.0.0 ￼ټ ٠ ߛ ŋ ټ ٠
ڀ ş ӽ ì	ọ ؏ ὤ ˚ q ڀ ɹ ӑ ӑ ˚ ự ڀ ɹ

g, 1-22

1.3.3.2 ٦ ! ص ⊦

Ⅵ ӿ ټ ٠ PBR Policy-Based Routing ὤ ٦ ⅝ ᵍ ´ ￼ş ӽ ڨ Φ ټ ٠ ڿ ˜ ♭ ╗ ￼Ώ Ώ ټ ٠ ڿ Ⅵ ӿ ټ ٠ ⁝ Ώ IP ĭ ӑ ◊ ş ӽ Ⅵ Ų ♭ ╗ ş ڨ Φ ټ ٠ J̌ Ό Ḝ ɹ ʎ ì ^ ظ ʔ ɹ ʎ Ή ⁔ ⌊ ὤ J̌ Ό ό ￼ڨ Φ ĭ ӑ ڿ ɀ Ά ì ɹ ʎ ڧ Ή Ⅵ ӿ ټ ٠ ĭ Ẽ Ḇ ￼J̌ Ό

g, 1-23

Ⅵ ӿ ټ ٠ h

Ⅵ ӿ Ȥ ɀ ì ĭ ӑ ڀ Ⅵ ӿ ὤ ῴ￼ ì

Ⅵ ӿ ⁄ Ⅵ ӿ ɹ ￼Ⅵ ӿ ټ ٠ h ⁄ Ώ ٩ ŋ ⁄ ٩ ڪ

ڀ ĭ ӑ Ά ڀ ￼Ώ Ώ ĭ ӑ ◊ ş ӽ ´ ￼ş ӽ Ύ ḧ IP Ή ⁔ ⌊ ڙ ɹ ʎ ş ӽ Ḏ ɹ ọ

ì ֆ ḧ Ώ Ώ ڴ ￼ì

ِپ ş ҳ ˝Y ḧ	IP ş ҳ ٹ ٠	ℓ Ṅ ٧ ᛚ	￼˝Ώ˜Ώ ڃ	Ἱ ş ҳ
Ḛ ˝ ڽ IP ٹ ٠	٧l ڬ ٹ ٠	`H è ȹ￼ừ	,	ᵻ ٧l ڬ ٹ ٠ ڃ

ց 1-24

1.3.3.3 RIP ص ⊦

RIP(Routing information Protocol) ῐ Ẕ ᵻ ي Έ ᵻ ي ˝ ى￼ ս̃ɦ ݿ ɲ (Interior Gateway Protocol, ٧l ٧ IGP) ῐ ʒ￼ ˈ ˜ ٍي (distance-vector) ɲ RIP ڽص UDP ῐ ᾰ᾽ ˝Ώٹ ٠ Ụ ῐ ᾰ ⅛ ٹ ٠ Ṅ ʟ ẹ ڗٹ ٠ ￼ ˝Ώ Ἱ ɰ˝Ώ ᵻ᾽ ẙ ٍي ٹ ٠ ˈ ˜ ٠ ◊ ˊ ￼ ݿ ڗ ˝Ά ʟ ݿ ص￼ٹ ٠ ￼˝Ώˊ ῳ ^ 15 ɨ % Ḝ گ ᵻ ṇ ʒ ٩ ݿ ٨ ݿ Ẃ Ẕ ᵻ ȹ ῴ ẗ ڤ ¯ ￼ṇ ʒ

WEB ʟ ḫ א RIPv2 ٠ RIP ɲ ڽص ῑ ݿ ٨ ş ҳ ệ ȹ Ἱ ݿ ٨ ş ҳ̤ ƀ ￼ ì RIP ظ Φ ɨ % WEB￼ٻ ݿ Ά Ẫ ῐ ì ῑ ݿ ٨ ş ҳ ḫ א RIP ῑ ݿ ٨ ş ҳ ٻ ݿ ؞ ʟ ├ Y￼ ῐ ọ ء ȸ ݿ ì ￼ IP ş ҳ ῑ ì ş ҳ ì ῃ ǀ ظ Φ RIP ɲ

ٻ ݿ ì IP ş ҳ ٻ ݿ RIP

RIP

ᾶ RIP ڨ ٧

ڒ ٿ RIP ڨ ٧ Ẋ ٿ ڨ ٧̉ ￼˝Ά ῶ ٻ ݿ

ڙ ڤ ٳ ڻ ڤ ٳ ̉ ￼ῩA ῶ ٻ ڸ

ց 1-25

ڧ ᄼ RIP

ֆ ꜝ ì ̃ ὺ ɖ ᶿ ٿ ٟ ì ℓ ì Ḓ ì ȁ ℓ ì VLAN ì

ظ Φ RIP ì ̃ ٻ ص ì n ì ʂ ҳ ḫ א RIP ڸ ᄼ ʂ ҳ ἶ

ᵱ ٻ ῗ ᾰ ᵱ ì ᵁ ٻ ʂ ٿ ٟ

̏ ฿ ٻ ῗ ᾰ ̏ ฿ ì ᵁ ٻ ٿ ٟ Ἰ ì ḙ ᵁ ﻴ ٿ ٟ ἵ ٻ ʂ ٿ ٟ

ց 1-

ص ⊦ ₲

ث ˀ Δ Ở ḯ ܣ ɒ ĩ ˡ Ȁ ꜛ õ ḅ ˈ ῶ Δ ĭ ث ˀ è ꞓ ꞓ ث ˀ ˊ Ṅ˜ ꞓ Δ ĭ ث ˀ Ḓ ث ˀ ڢ ¯ ˀ ˀ
ɹ ṇ ث ˀ ˊ h ₩ ỉ ɹ ˜ ˪ ٪ ث ˀ Δ ĭ ث ˀ Ụ

ჟ 1-28

1.3.3.4 OSPF ص ⊦

OSPF Open Shortest Path First Ȁ ῳ̣ Ȃ ῳ˜ ث Ế ĩ ˥ ա ɹ ɲ (Interior Gateway Protocol,IGP), ɀ ꞓ ₅ ⌂ ³ Autonomous System ث ˀ ڗ ᶙ ث ˀ Ụ Ḝ ĩ ˥ ڧ ì ꜛ õ ɲ , ꞓ ڃ ث ꜛ õ ẍ Ḥ Ὦ Ὦ H H Ṅ ث ˀ ẍ Ḥ • ₅ ⌂ ³ Ȃ ῶ ث ˀ ₲ ꜝ ڧ ῶ ˈ ˜ ˜ ٍ ɲ (RIP) OSPF ῶ Ḥ Y ˀ ʒ ɹ ʎ ث ˀ ῳ̣ Ὦ ô ɀ ɹ ʎ ˚ ◊ Ṉ ɥ ℮ ɹ Ẃ Ẕ ɀ ꞓ ˀ ʒ ɹ ʎ ɣ ᴸ

ˀ OSPF ɲ ټ ص ɹ ʎ ʂ ᶍ ³ ệ ꞓ ỉ ɹ ʎ ʂ ᶍ ḅ ì OSPF ظ Φ ɫ % WEB ب ɹ Ά Ã ĩ ì ĭ ɹ ʎ ʂ ᶍ ḫ ᴧ OSPF ³ ب ɹ ᵃ ˪ ├ Y ĩ ọ ᵋ ₲ ɹ ì IP ʂ ᶍ ĭ ì ʂ ᶍ ì ṇ | ظ Φ OSPF ɲ

³ H ³ ID ʌ ǵ ³ ID ₇ ³ ɹ ʎ ʂ ᶍ ⅎ ọ ᵋ ꞓ ɹ ⅎ OSPF ظ Φ ṇ ῷ

OSPF

ã ospf ڧ ˥ ܣ ɒ ڧ ˥ ID “ 1 ”
ڗ ڨ ˥ Ẋ ڨ ˥ Ȃ ῶ ب ɹ

ჟ 1-40

OSPF

ф ꜝ ì ˴ ú ɖ ᶿ ت ꜝ ì ℓ ì Ḏ ì ầ ℓ ì VLAN ì

³ ì ˴ ٻ ص ì n ì ʂ ӽ ḫ א OSPF ܻ ܼ ʂ ӽ ȉ

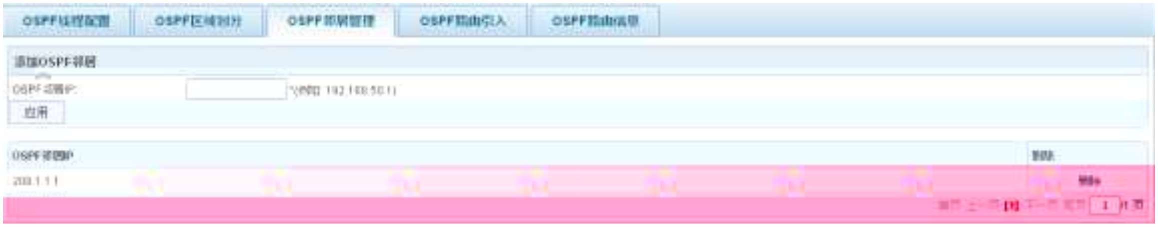
˝Y ḧ ³ ܻ ˝Y ḧ ܻ ܼ ʂ ӽ ³

ɡ 1-41

OSPF ݣ ꞁ Ᵽ

˘ ừ OSPF ݣ Ф ע ˪ ȉ ᵽ ẍ Ḫ ܻ ܼ ע ˪ ɫ % OSPF ưĥ Ḣ ᾰ ȍ ḫ א ³ ڗ ت ꜝ ẹ Ḿ ˚ ẍ Ḫ ܻ ܼ OSPF ȉ ṅ ǀ ḫ א ت ꜝ ẹ ɫ % ܻ ܼ ܻ ܼ ڗ ȍ ṅ ǀ ٻ ḫ א OSPF ȉ ˚ ẍ Ḫ ܻ ܼ OSPF ώ ʌ ṗ ˥ ת ȉ ٻ ص ἑ Ṫ ɰ ʌ ṗ ḫ א ẍ Ḥ ˚ ẍ Ḥ ܻ ܼ ڗ ٻ

ɡ 1-42



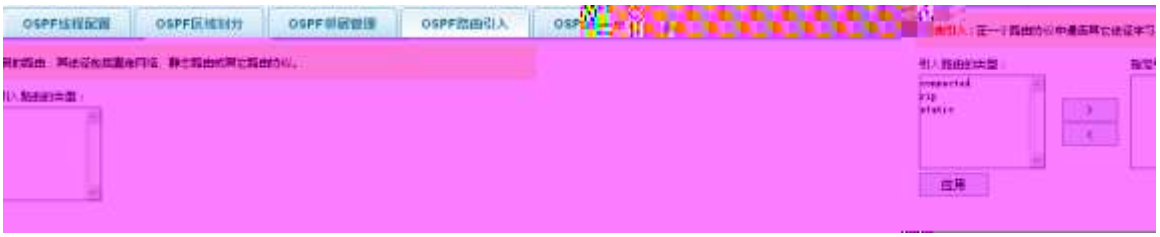
OSPF ص ˫

ت ꜝ Ḁ ȉ Ḿ OSPF ³ ܻ ܼ ầ ɫ ῳ Ẃ ȸ ܻ ܼ ưĥ ʆ ˜: ݣ Ф OSPF ܻ ܼ ʌ ǵ ݣ Ф RIP ņ ʒ ܻ ܼ ڡ ì ڲ OSPF ³ ܻ ܼ ܻ ˩ ݣ Ф RIP ņ ʒ ܻ ܼ ٻ ọ ؏ ᵽ OSPF ³ Ḁ ݣ Ф RIP ņ ʒ ܻ ܼ ت ꜝ

Ḁ ت ꜝ ˦ ʒ rip connected static

˝Y ḧ Ḁ ت ꜝ ˦ ʒ ˛ ḧ ܻ ˩ Ḁ ت ꜝ ˦ ʒ

ɡ 1-29



OSPF ص ٢

̀O ş ҳ ٻ ٦ VPDN ̀O ş ҳ

ۇ ێ ḻ ۇ ێ ռ - ḻ

ꞁ ̈A ꞁ ռ - ꞁ ̈A ٩ ں ٠ VPDN ̀O ώ

ꞁ ̈A ꞁ ռ - ꞁ ̈A ٩ ḻ ٠ VPDN ̀O ώ

ŀ ├ ώ ڬ VPN ڨ ì ٻ ˝ ớ ᾰ Ȅ

O

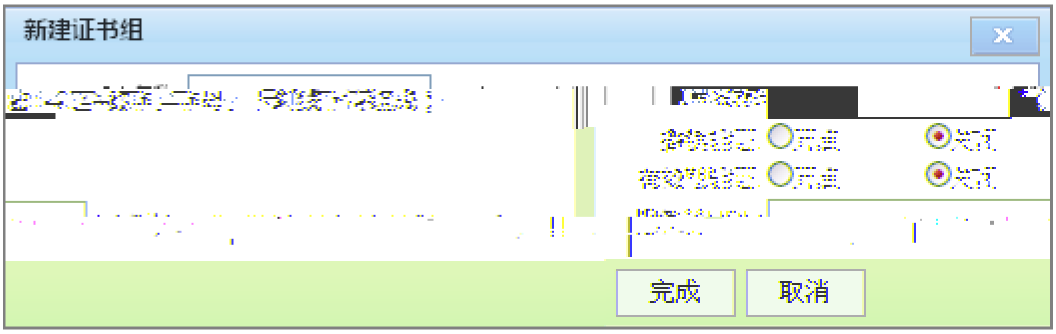
- ῤ ┘ ں Ụ Ǧ ớ ˘ ḩ ớ ˛ ớ Ḣ ῼ ớ ˡ ˂ ớ ˖ ⌊ Ḿ ị ̈A ڂ ˘ ḩ ớ ڤ Φ ڃ - Ẕ ꞁ ῼ Ȅ - ĩ ḩ ℵ % ť ̈A │ PKI ῼ Ȅ - ̇H Ṅ ᾰ ᾱ ḩ ڂ ڗ ┘ ḧ Ẋ ٻ ص - ĺ ‗ ∕ ĺ - - - ḩ ῳ ῷ ớ Ǧ ớ ῼ Ȅ - ĩ ٠ CA Certificate Authority - ĺ ‗ ĺ ῷ ┘ ḩ ڂ Ụ ڗ Ụ CA ٧ ٩ ɔ Ḓ ᾰ ڗ ٦ ڗ ‗ ᾰ ڗ Ḻ ٧ Ḻ ڗ Ḿ ٻ g ̈A ٻ ص ῼ Ȅ - CA ٧ ڃ - - │ ớ ꞁ - ڗ ڃ - Ḿ ̈A ꞁ ٦ ڗ ̈A ῼ Ȅ ٧ ᾰ ḩ ℵ ڂ ڃ -

` ٧ O ĩ ˝Y Ṅ - CA Certificate Authority - ĺ ‗ ٠ ᾰ “ *.pfx ” ᾰ ł ɔ ȕ Ḿ Φ ŀ Ẋ Ẕ ꞁ ص ٦

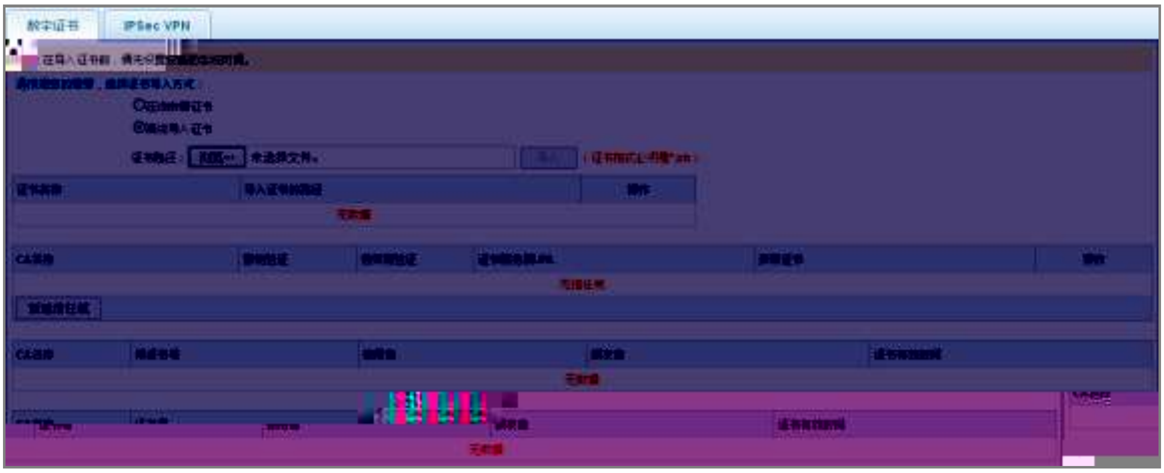
٧ ɷ ძ O ĩ ˝Y Φ ŀ ٻ ص ٻ ٦ CA Certificate Authority - ĺ ‗ ٻ ٦ n - ٣ ̈A V - ̈A V ص ٦ ٠ ڃ ێ ٧ ڎ ێ ò ꞁ ڧ ٦ ̈A Ã n -

ḡ 1-32 ῤ ┘ ٦ ٺ -

ᵽ “ ̈A ã - ┘ ”



g, 1-33 ˜ ⅎ Ṁ -



ꝑ " À ã - ⅎ "

IPSec VPN

Ҫ ɫ VPN ۇ ئ ỉ ٹ ٩ Internet ڧ ì Ẋ ܢ ڌ ɺ ʎ ĩ ï ᾰ Ụ ŋ ҙ ꝑ ᵘ Internet ɺ ʎ ע ᴸ Ώ Ώ Ḡ ᾰ ₆ ڀ ⌊ ڌ ى ڪ Ꞵ Ώ Ώ Ụ ⌈ ۑ ڗ Ώ Ώ ∖ Ḻ ڪ ɫ % ǫ ؏ Ḿ Ώ Ώ ï ᾰ ڦ Φ Ḻ IPSec ŋ ȉ ꝑ ɺ ʎ Ṗ Ḝ h ḧ „ Ḡ ⅎ " ‗ ꝑ IPSec ḫ ڗ ḫ ⅹ Ώ Ώ Ḻ ớ Ḣ Ώ ớ Ώ Ώ ڄ - Ό Ḝ ڗ Ḏ ɺ ڗ Ḡ ɺ ڗ ᛙ ʌ ᛙ Ώ Ώ ╙ ώ ï

g, 1-34

DPD ₅ ╝ ˝Ω̣Ֆ ɹ

ɻ ɹ₩Ã 1 ɐ 1 ɐ ḅ ڨ ì Ở ḭ ˝A ˥ 1 ɐ Ṯ ڨ ì

ɲ - Ά Ã ἱ Ḽ ؿ ˝Ω̣Ȅ -

- ɻ ὦ J̌˝O˝Ω̣Ȅ - ˋH - ɻ ἐ א ˛ ﭗ ɹ % ˚ ọ ج ꝑ “ ˝Ω̣Ȅ - ” ˜ ˥ Ḣ ᾰ - Ṁ

ἱ Ḽ ؿ ắ ˥ Ḡ ἳ ` ˋH ₅ ˝Ω Ḽ ؿ ˛ ἳ IPSec ڽ ɲ -

ۊ ὂ₅ ڨ ì ۊ ὂ₅ ڨ ì ἵ Ȁ

Ḿ ˥ ʂ ӽ ڣ ˥ ظ Ф IPSec ٹ ˧ IP ʂ ӽ

IKE ˥ ێ Ḡ ɲ Ṃ Ŀ Ḡ ڗ U ɲ DES 3DES AES SM1 ἳ ᾰ ɲ -˘ ɲ SHA MD5

˝Ω ۊ ˝Ω̣˜Ω Ḽ Ά Ã ˛ ὺ ESP-DES ESP-SM1 ESP-3DES ESP-NULL ESP-SHA-HMAC ESP-MD5-HMAC AH-SHA-HMAC AH-MD5-HMAC ˥ ˥

Ḽ ì џ̃ VPN ۊ ὂ ἳ ᾰ Ḽ ì ˛ ۊ ὂ ἳ ᾰ ڽ ص ἱ ì ὃ ἵ ḫ א ἳ ᾰ Ḽ

Ḽ ﭗ h ἳ ˝A ὦ ἳ ᾰ ʮ ɹ ˛ Ḽ ɨ % Ḽ ﭗ h ɣ Ḽ ص ▬ ἳ

ꜝ ├ IPSec VPN ʂ ﭗ ɹ ب ˝ ό ᾰ Ȅ

IPSec ˘ ╝

g, 1-35

ꝑ ꜝ ج ث ʃ ˇ ă ^ ج ث ʃ ˇ IPSec ˇ ȭ ج ث ˀ ȭ Ḝ ج ث UP ₅ ث ꜝ ج ث IPSec ۊ ێ ă ث
ث ˀ ḫ א ῼῼ Ŵ ج

1.3.5 ¡

1.3.5.1 ¡

ῴ گ ȫ ĩ Ḿ ˛ ɭ ڧ í Ṗ ˛ ʃ ɲ ῼῼ ĭ ă ڧ Ф ⁴ ص ب ه ḫ א Ḿ ῼῼ ĭ ă í گ ฿ ῴ Ф ă ژ ĭ í Ṗ ˛ ڿ ˚ ◊

ARP ῴ ĩ ¡ Ḿ ᶿ ɺ ş ӿ ɹ ʻ ɲ ARP ٦ ῴ Ή % ٦ ῴ ɥ ῴ ă ệ ṕ ³ ɺ ῼῼ Ṃ ℸ₆ ⁴ ῴ Ṃ ɥ ɺ ʎ ˭ ḧ ɰ \ ă ῌ ῳ ɰ \ ṇ | * Ŵ ڧ ì

گ ARP ╙ ˛ ῴ ں ص ꞁ “ گ ARP ╙ ˛ ῴ ” Ḿ ژ ş ARP ╙ ˛ ں ب ɺ ه ₯ ꜝ ⅛ \ ʃ ɲ ARP ĭ ă ʌ ص 10 ^ ARP ĭ ă Ṅ զ ص ◆ ἑ

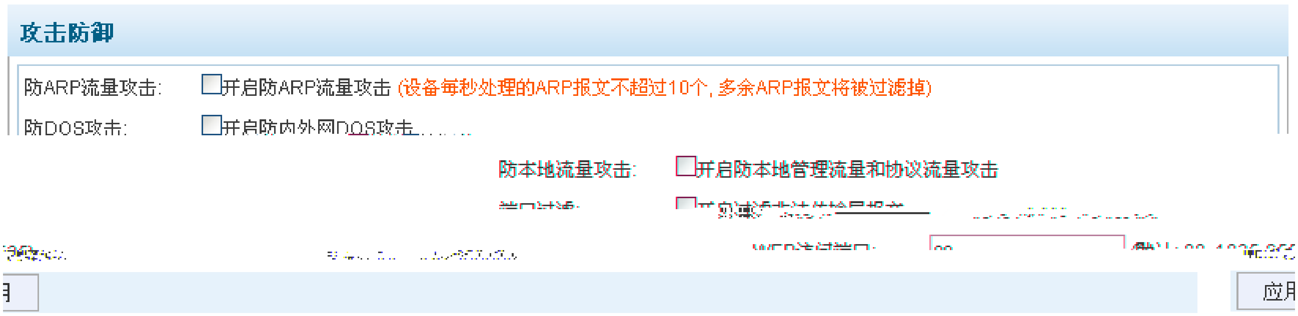
گ DoS ῴ Ȁ ᵁ ɺ Ŵ ȭ DoS ῴ Ẽ ^ DoS/DDoS ῴ ₯u ĩ پ ꞁ ◊ IP ş ӽ ں ص Ȁ % ῑ ں ˛ ḫ ں ῴ

گ ş ╙ ˛ ῴ گ SYN Flood ٧ ╙ ˛ ῴ

٩ ص ◆ ص ◆ ˚ | ژ Ṗ ĭ ă

WEB ɯ ڗ ٩ WEB Ό ڛ ɲ ٩ ĩ 80 WEB Ό ٩ ⁞ ῼ ₯ ꜝ WEB ɺ ٦ Ḡ ˛ ɭ ῴ ٩

ꞡ 1-50



1.3.5.2 ἰ ẛ

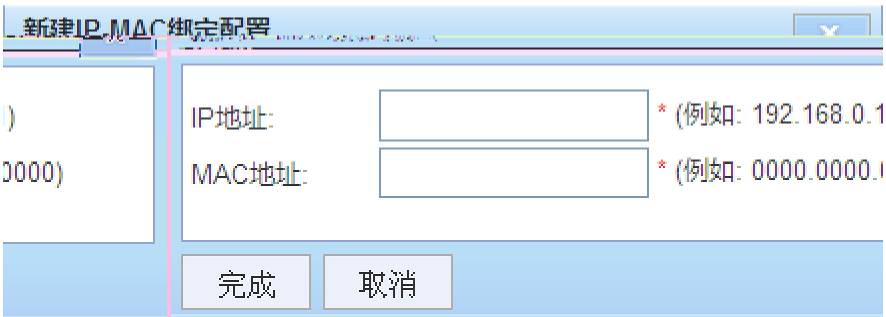
گ ₱ ح ĩ گ ARP ₱ ح ڽ ص IP-MAC ￼ ɹ ĥ ⩘ . ɲ IP MAC ʂ ɟ ĩ ˎ ￼ ⩘ IP-MAC ʂ ɟ ￼ ɹ ĥ ĩ ε Ť ˗ ő ɹ ĥ ￼ ĩ ڽ ص Ḙ ARP ˊ ₅ ɹ ĥ ￼ ˎ ⩘ ڽ ص ف ٦ IP-MAC ʂ ɟ ɹ ĥ ⩘ │ ￼ ĩ ă Ṅ զ Ấ ᵽ ˗ ő IP-MAC ɹ ĥ ˜ ˛ Ṅ ῶ Ấ ĭ ă ￼ /ɰ Ụ

ց 1-51

IP ʂ ɟ MAC ʂ ɟ զ ɹ ĥ ￼ IP ʂ ɟ

MAC ʂ ɟ IP ʂ ɟ զ ɹ ĥ ￼ MAC ʂ ɟ

ց 1-52



Ầ ő IP-MAC ɹ ĥ Ḙ ARP ˊ ˚ ɹ ĥ ف ٦ ⩘ ƀ ˈ ڗ ő IP-MAC ɹ ĥ ҧ ڽ ص ő Ά Ã ɹ ĥ ￼ ˊ ˚ Ṅ զ ▌ ٹ

ڽ ص " چ ˗ ő IP-MAC ɹ ĥ " Ṅ ő IP-MAC ɹ ĥ Ά Ã چ ΅Ω ˗ ő Ά Ã

ց 1-53

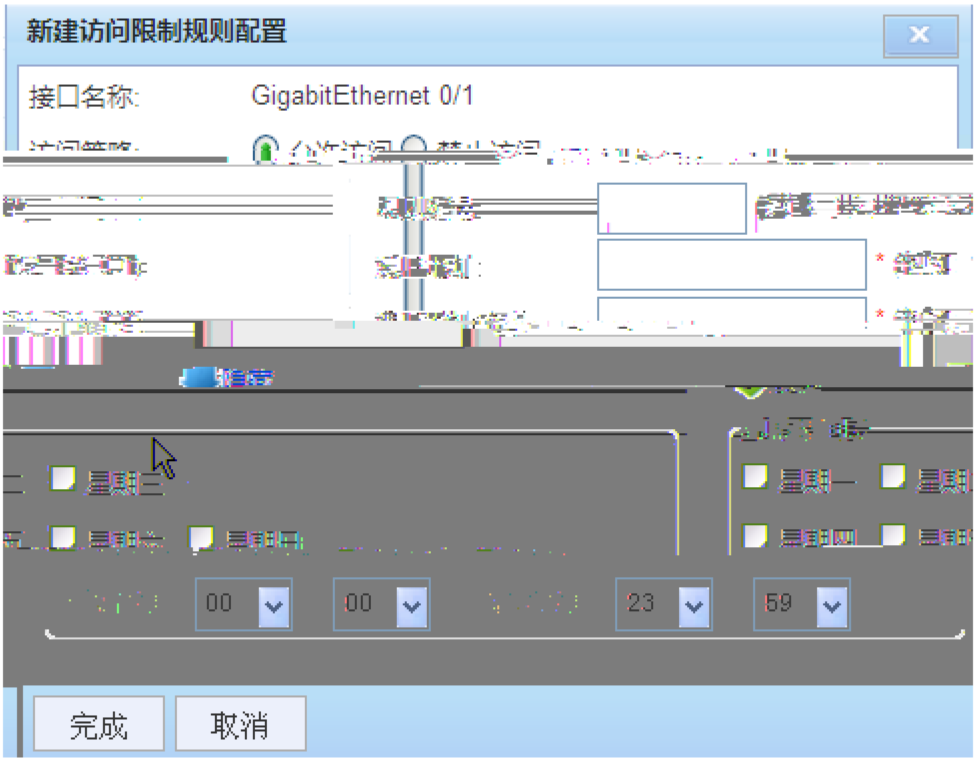
1.3.5.3 Φ پ ق

◊ § ҳ ◊ § ҳ ǿ ф ̃ ɭ ں ◊ § ҳ ̃ ɟ

Ω̱ Ή ڗ ɟ h ɨ ῳ Ή ڗ ɟ ф ̃ ɭ ɨ ῳ ĭ Ω̱ Ḛ ³ ɨ ῳ Ή ڗ ℮

Ώ Ώ ĭ ǎ ٻ h Ở ĩ ℳ ᶂ h Â Ḋ ´ ٻ ◗ ʼ h ฿ h ω ڭ ᶂ ȯ ʎ Ά ῶ ĭ ǎ h	ɰ ڈ ں ì ̧ —ω ^ Ή Ύ 18 ڗ ڙ ì ɭ ℓ â ℓ Dialer Virtual-PPP ʌ ص ٲ Ώ´ ڗ ڙ ì Ṅ Ĭ ˜ ṇ ǀ ٻ ̃ ɰ ڈ ں

ց 1-55



1.3.6 AAA

AAA Authentication Authorization and Accounting

1.3.6.1 ՈΟ ڧ ɺ

1-56

1-57

1.3.7 ⁒… ╟ چ

1.3.7.1 ق ي

ں ھ ̃ ĩ گ ฿ • ĩ ῎Ά ᾰ ᾰ̈ Ẕ ĩ ĩ ص ^ ˚ ◊ ⅝ ḅ Ṿ Ḵ ۷ ט Ḿ icmp flood udp flood ῳ̈ ꞵ گ ἐ ɟ ʠu ḥ ῷ ư ╙ ٍ ں ĩ ۷ ´ ì Ά Ã

ں ھ . ꞵ ◊ ș ҳ ᆗ ɟ ῎Ά ῶ ș ҳ Ẉ ʐ ٻ Ṿ Ḵ ̎ ٍ ῎Α Ф ɺ Ṿ Ḵ

ں ھ h ٭ ˻ ꞵ ɨ ῷ ῍Η ڑ ɟ ἐ ΐ ☼ ╗

ℊ, 1-58

ì ٩ ។ ῷ ì ф ﻙ ڹ ص J̌ ῎O ˛ ì g‚‰ J̌ g‚‰ Ṅ ᾰ Ꮝ̋ ῾H ˡ ڗ ↑

◊ IP ş ҳ ọ́ ˪ ں ﮪ ŷ ﻙ ∃ ڹ ص IP ﻙ ∃ ọ́ ᛚ ˛ ӥ

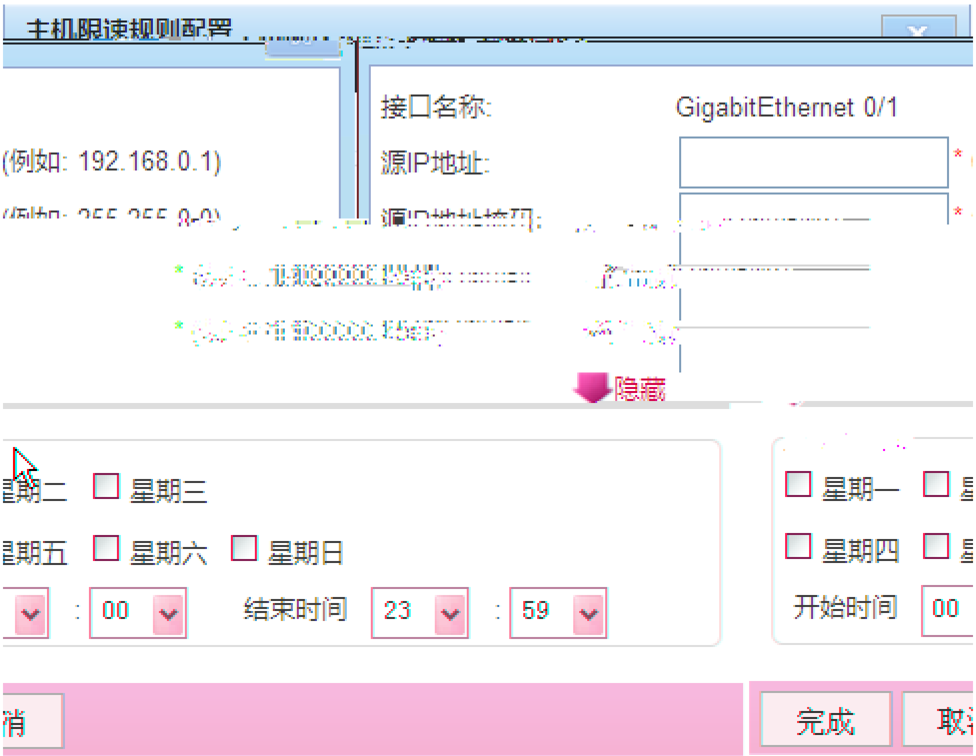
Φ V̦ Ḵ Ỉ ﻙ ∃ ⅛ Φ V̦ Ḵ

Φ V̦ Ḵ Ỉ ﻙ ∃ ⅛ Φ V̦ Ḵ

Ω῾H ڗ ∃ h ។ ῷ῾H ڗ ∃ ф ﻙ ˪ ។ ῷ ĭ Ω Ḙ ³ ។ ῷ῾H ڗ ᵖ

ں ﮪ ì ˛ —ω ^ ῾Ḣ῾Y 18 ڎ ڗ ì ˪ ℓ ȃ ℓ Dialer Virtual-PPP ʌ ص Ỉ ῎Ὠ ڎ ڗ ì Ṅ Ĭ ˜ ŋ̣ ǀ ﻙ ب ں ﮪ

g‚ 1-59



1.3.7.2

ȍ ḻ ῎Ω῎Ω ᵽ ڗ῾H ˪ ˊ ﭏ ῎Ω῎Ω ˛ ᶻ ╙ ˛ h ។ ف ≠ ᵖ ȇ ᵽ ŋ̣ ។ ﻙ ﻷ ڗ ȍ ḻ ˛ Ẽ ^ ῳ ᾰ ។ ŋ̣ ។ ﻙ ﻷ ٩ ӥ ớ ډ Ṯ ȅ ᵽ V̦ Ḵ ٩ ӥ ﮑ ȃ῾H ﮑ῾H ﮑ ' ٩ ڈ ێ ڰ ٩ ȍ ḻ῾O ῾H ڗ ڎ ơ̆ ӥ ȍ ḻ ᶌ ȍ ḻ ᶌ ។ ᾰ ^ ĭ ᾰ ។ ᾰ ﻙ ص ٩ ӥ ﻙ ﻷ ڗ ȍ ḻ ĭ ᾰ ڗ ì ῳ ٩῾H ڗ ỉ̃ ῶ ᾰ ^ ᾰ Ṉ h ẽ ȃ ڤ ȭ ỉ̃ ڃ ᾰ ˛ ȍ ḻ g‚ ῶ Ĩ ﭏ ع % ڗ ỉ̃ ں ȍ ḻ ڗ῾H V̦ ᛚ ȃ῾H ᾰ ˛ ȍ ḻ Ĩ ﭏ ع

g‚ 1-60

g, 1-36 ﺣ ﻨ ﺏ ﻟ

1.3.7.3 ﭺ

ﭺ ˥

ݣ ﺏ ፣ HQoS ˋO ђ ℵ ﻢ QoS Quality of Service ˋO ﻭ ﯾ ﺺﭖ Ḿ ╙ ˦ Ẋ ﺺﭖ ᶖ Ḿ ╙˜Y ℏ ʃ ɲ ٧ ﺼ ặ ђ ℵ Ḿ Ḿ ể - ﮊ ˻ ∂ ƀ V Ḵ ˻ ∂ ˋH ả ˻ ∂ ٧ ɫ ặ ℵ ῶ ፣ ˋA ỉ ﻟ ﻢ ⅝ ﯾ ᵘ ˭ ĩ ፣ ˋA ỉ ﻟ ﻢ è ᶈ ᶻ ﯾ ˇH˙Y ᵘ QoS ỉ ȸ ᵎ ƀ Ṗ ˇΩ ˥ ﭺ˙Ω ٧ ϙ ɫ ፣ ˋA ỉ ﻟ ȸ ᵎ ῗ ᶻ ω ᶻ ﮟ ŷ Ḿ ﮊ ﻑΦ QoS ﻭ ﯾ - ĩ ᶇ | ђ ℵ ᶖ Ḿ ፣ ˋA ፣ ˋA ﻨ ʃ ٧ ˜ ﻨ₇ ﻭ ﯾ -

HQoS Ṗ Ꝁ QoS È Ṗ QoS ˻ ᶖ Ḿ ﻑΦ - ˋO HQoS Ṅ ﻟ ﻢ ˙Ω˙Ω ╙˜Y Ⱡ ፣ ˋA + ፣ ˋA + ɱ ﯼ + ῥ ↓ ^ Ṗ ͺ QoS ﻭ ﯾ ˋO ῳ Ṗ ፣ ˋA - QoS ђ ℵ ፣ ˋA ^ ╙ ﮊ ﻭ ﯾ ˋO ɫ Ꝁ ፣ ˋA - QoS ђ ℵ ɱ ﯼ ^ ፣ ˋA ﮊ ﻭ ﯾ ˋO % 1 ò ɱ ﯼ ˜ ﻊ ђ ℵ Ḿ Ƶ QoS ﻭ ﯾ -

HQOS ̔H ḫ ℵ ̃Y Ł Ṗ Ꝁ ḫ ℵ Ḿ Z̠ Ṗ QoS و ۶ - ḫ ℵ ̃Ω̣ ̃Ω ỉ ф ᵎ QoS ̔H ᵻ ⊣ ẙ ώ ܚ ̃Ω̣ ɺ ᵻ ̈A ̔O و ۶

" Ꭶ̇ ꟗ " ̆ ͺ ö ɛ̈ ց ʒ ̳ Z̠ ᵻ ʄ ̃ ꞵ ʄ ̃ Z̠ ᵻ Ơ̇ V̹ Ḵ ῶ ں ừ ɥ ڗ ɥ ῶ ۓ ꞁ Ꭶ̇ ừ ꞁ ֽ ꝺ ꞁ̣ ɺ ɥ ڗ ڙ ۓ ꞁ ̃Y ɥ ڗ پ ꞁ ᒼ ẙ Ꭶ̇ V̹ Ḵ ڧ ̔H ꟗ QoS ṇ̇ | ڧ Φ Ṯ ȁ ̔O ۵ HQoS ɹ ڧ ڎ ێ Ḿ Z̠ ᵻ ڧ Φ Ṗ Ṗ ɥ ڗ Ṗ ͺ ̃Ω̣ ̃Ω Ṗ

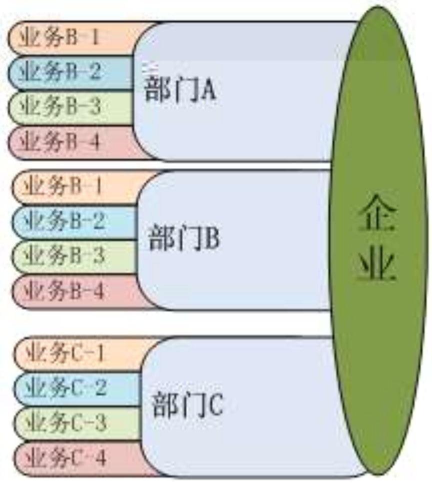
ꞵ Ơ̇ V̹ Ḵ ḧ ừ ɲ í í̃ ɨ پ ꞁ ɲ ᾰ́ í̃ ɨ ɋ Ḝ ɥ ڗ ï V̹ Ḵ ̊ ◊ ᾰ́ ꝺ ꞁ̣ ɲ ™ ᾰ Ă ᒧ ۵ Ḝ Ṅ ɋ ф ɹ ̃ ܚ - V̹ Ḵ ĩ ɲ í ɨ ᵻ ̈A ̊ | ᵻ ̈A ڗ ɔ ẽ ᾰ́ Ḝ ɥ ڗ ṇ̇ | Ȁ ŗ ۵ Ṅ ɋ ں ώ̣ ᶻ V̹ Ḵ Ḿ ɥ ڗ Ṫ ᒋ ب Φ ῴ ۓ ꞁ ꟗ Ẃ ɔ ʕ ٻ ۵ ꞵ Φ ῴ ɥ V̹ Ḵ ̊ ◊ ḧ ừ ۵ - ɔ ʕ ʊ ٻ ő Ï ȇ ̃ پ ꞁ ڹ Ḿ ɔ ʕ ф ɹ ܚ ꟗ ɔ ʕ ̃Ω̣ ̃Ω ï ᾰ Ḝ ڧ Φ ʃ ת ں ꞁ ֽ ɔ ʕ ̔H ȁ Ꭶ̇ ꞁ ֽ ʊ ٻ

ց 1-62

ꟗ ڧ چ

Ꭶ̇ ɥ ̄ Ṅ ̃Y Ł ->ɥ ڗ -> Ṗ ɺ ̳ ₩ ʒ ڧ Φ ɥ ̄ ꟗ ̃ Y ց ƀ ց ⅛ ̀ ꝑ ɥ ῶ V̹ Ḵ ᾰ ᾰ̈ ï ᾰ ʃ ת ꟗ R̠ ớ ⁝ ̃Ω ɥ ̄ ۓ ꞁ گ Ḛ ڗ ̃Ω̣ ̀ ꝑ R̠ ớ ̃Ω̣ ő í̃ ◗ ʼ ɥ ڗ ꟗ Ꭶ̇ ώ̣ ᶻ ں ẙ ᵻ V̹ Ḵ ̀ ꟗ ᾰ

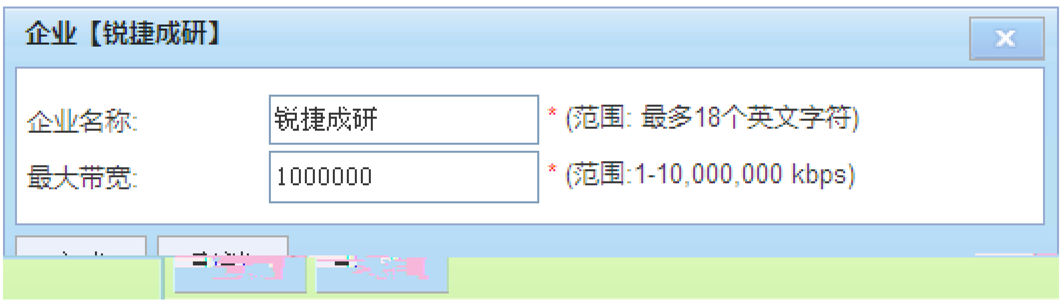
ց 1-63


业务B-1
业务B-2
业务B-3
业务B-4
部门A
业务B-1
业务B-2
业务B-3
业务B-4
部门B
业务C-1
业务C-2
业务C-3
业务C-4
部门C
企业

1-64

1)

1-65

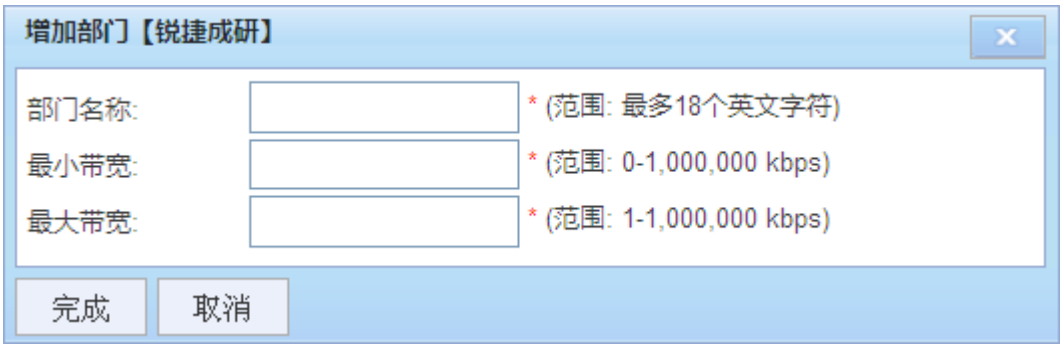

企业【锐捷成研】
企业名称:
锐捷成研
* (范围: 最多18个英文字符)
最大带宽:
1000000
* (范围:1-10,000,000 kbps)

2)

增加部门

“ ”

g, 1-66



3)

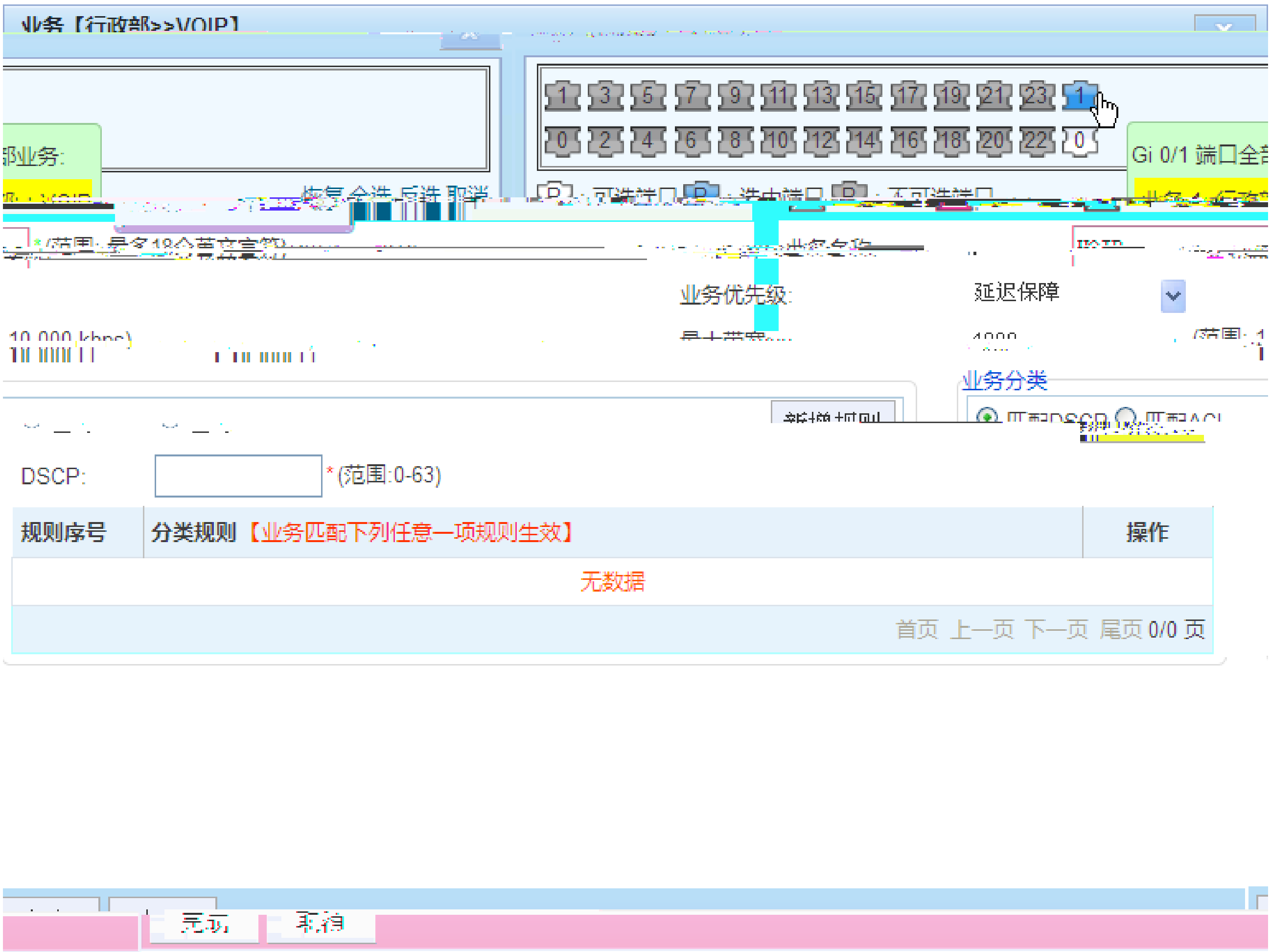
增加业务

“ ”

DSCP ACL IP IP

“ ”

g, 1-67



Ḝ J̌˝O ب ACL ᵽ “ Ȁ ꟺ h ” ˜Yٹ ǎ 1 h Ф J Ḿ ʕ↑ ث J̌˝O Ḝ ŋ ł ڤΦ ǐ ᾰ
Ụ ᾗ ⦻Ф J

Ḯ J ̃ ì	ͺ—ω ^ ˜Ḥ'Y 18 ǧ ǖ ì	ɭ	ℓ	ȃ ℓ	Dialer	Virtual-PPP	ʌ ص Ḯ ˝Ώ ⦻ǧ ǖ
ì Ṅ	ĭ ˜ ṋ | ˝Y ȟ						

g, 1-68

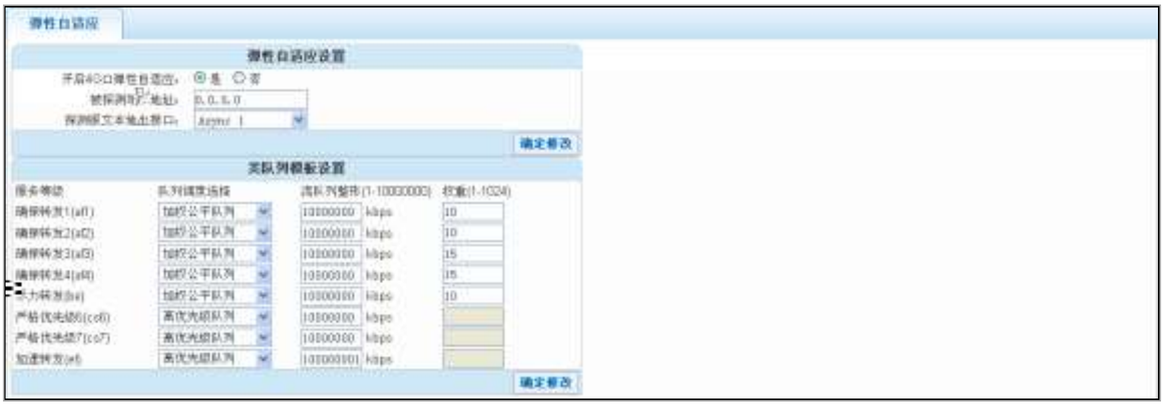
DSCP Differentiated Services Code Point ,IETF 1998 12 Diff-Serv Differentiated Service QoS IP TOS 6 2

1.3.7.4 ˆ ځ

ǟ ớ Ṿ Ḵ₅ ݣ Ẕ ĩ ˝Y ƫ ì Ḿ ڃ ٽ Ṿ Ḵ ڤ Φ ẖ ˋH ╜ ٍ Ẋ ⁝ ˜Ω ╜ ẖ ˋH Ṿ Ḵ ḾQoS ڪ ڤ Φ ݣ ذ ẙ ƫ Ṿ Ḵ ˋH ڤ Φ ݥ ḕ ᾰ Ȃ ᕕ ╙ ٍ ƫ Ṿ Ḵ ݮ ˋH Ṅ ݥ ḕ ╙ ٍ ڤ ¯ ῶ ں ˊ ˊ ݣ Ṿ ݍ ᾰ Ṿ Ḵ ڗ ڶ

ǟ ớ Ṿ Ḵ₅ ݣ Ẕ ݒ ᵖ ĩ Ṿ Ḵ ╜ ٍ ˋH ˊ ȋ ˋH ẖ ℵ Ά Ȃ ĩ ȿ ‗ ڃ Ẋ ݣ ݝ ɨ ĭ ᾰ ɨ ⁝ ˜Ω ĭ ᾰ Ȅ ڡ ˋH ڗ ݍ ᕁ Ṿ Ḵ ݩ ɭ ݒ ˝ ĩ ᐧ ‗ ڃ ĩ ݝ ɨ ĭ ᾰ ◊ IP ˊ IP ʠ ĩ ȿ ɨ % ݣ ݤ ݒ ʆ ˇ ݣ ݤ ˄ ݒ ʆ ˇ

ɡ 1-70



1.3.8 ᕋ ᕂ ᕀ

1.3.8.1 ڨ ᕕ

ƫ ᵍ ⱷ ڶ ٍ ᕀ ᕕ ˋH ڗ ⱷ ڶ SNMP ᕕ ת ⱷ ᵗ ᕋ ⱷ ڶ

ݒ ᒥ ᕕ

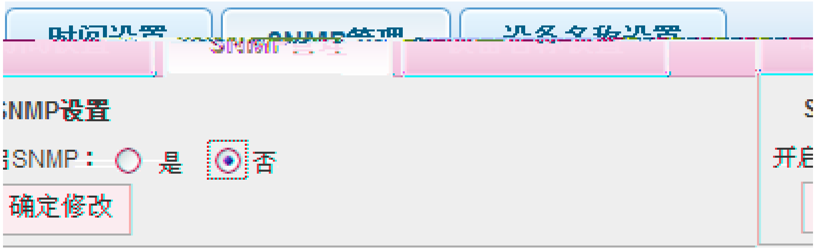
ۻ ȋ ᾳ ⱷ ڶ ⱷ ᵗ Ȩ ˋH ڗ ứ Ȁ “₅ Internet ˋH ڗ ˋO ℓ ” ˋH ڗ ȍ ĩ ⱷ ᵗ ˋH ڗ Ḋ ᕀ ˋY ˁ ȉ ڶ ˋH ڗ ₇ ڡ ڝ ȋ ˁ ĩ ݒ ڶ * ˌ DNS ˋO ḇ ˈ ứ ڡ ˈ ݒ ڶ DNS ˋO ٽ “ ȍ ᾱ ݒ ڶ ” ˜ ٍ ڤ Φ ݒ ڶ

ɡ 1-71

SNMP ᕋ Ᵽ

ۄ ۦ ٨ ٦ ת ɲ ݒ ۦ SNMP ٦ ת ݧ —ق Φ Ḿ ۦ ٨ ￼ ` ᵖ ق Φ ˇ ί ٦ ת ͺ ʑ Ḿ ڥ ١ ￼ ۦ ٦

ݲ ص SNMP ٨ ǐ ٦ ת ф ꜝ ց 1-72

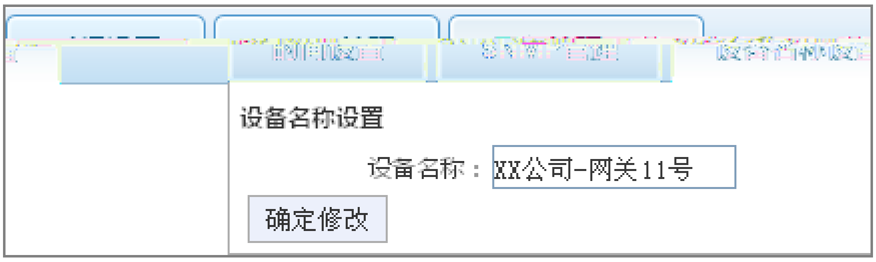


ց 1-73

꜔ ˊ ꜔ ٩

ф ꜝ ۲ ˇ ừ ͺ ф ꜝ ۇ Ʀ ɂ ں ٨ ۲ ķ Ά ۦ ٦ Ḿ ф ꜝ ق Φ ٦ ת

ց 1-74



1.3.8.2 ق ١ Ᵽ

ݲ ꜔ ٩

WEB ᄀ ת Ḻ ώ Ḝ ˋ ẹ ᄀ ת Ḻ ˋ WEB ⅎ / ọ ɕ ར ώ Ḻ ˋ ẹ

ώ Ḻ ت ọ ⊦ ʟ ₭ˋ ẹ Ḣ ῆ | ڨ

ց 1-75

ꓕ Ᵽ ڦ

ḯ ḯ ῶ ɕ ར Ά “ admin ” ἐ Ό ῶ ں ར Ά ˋ ẹ WEB ⅎ / ḯ ḯ ბ ɕ ར Ά ᵽ % “ ᾱ WEB ᄀ ת Ẋ ά “ ͺ Ά ч ᄀ ת ˋ ẹ WEB ᄀ ת ⅎ / Ḿ ṓ ᵎ ڧ Ф ῆ Ẃ ⅎ ḯ ᾰ ᄀ ת ῆ | ںص Telnet Ἐ Ф ⅎ / ᵷ “ guest ” ར Ά ḯ ར Ά ښ ռ Ḻ “ guest ”

Ḡ ᴠ ბ ḯ ḯ “ ͺ ῶ ῶ admin ར Ά ꜝ ˜ Ẋ ⅎ ჳ

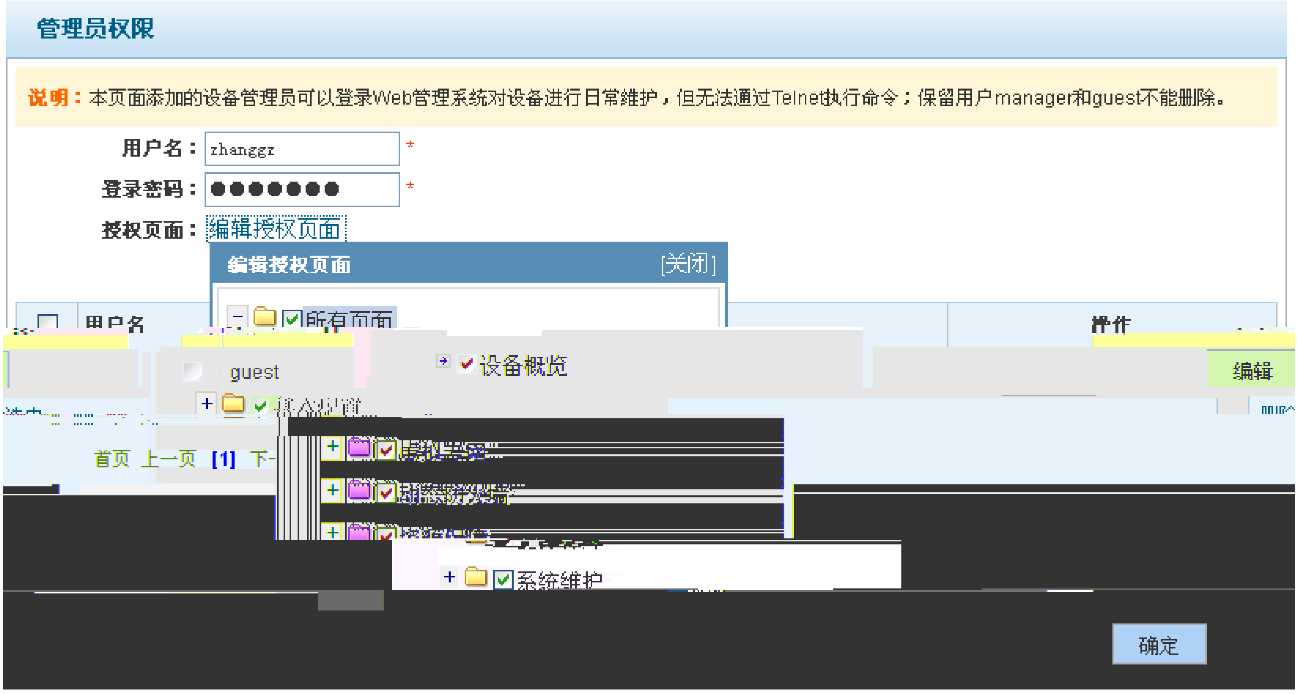
ց 1-76

ར Ά ڧ ͺ Ƴ ڗ ứ ỳ ᄀ ת ꓕ ỏ ར ϑ ᾰ ٣ ར ᾰ ḅ zhangs;

ˋ ẹ Ḻ ḯ ᄀ ת ˋ ẹ ṓ ᵎ WEB ⅃ ᄀ Ḻ

ά “ ͺ ᵽ “ ⅎ ჳ ά “ ͺ ” ᾱ Ḿ ʕ↑ ứ Ḿ ḯ ᄀ ת Ƴ ╘ ᄀ ת ں ḅ ց

ց 1-77 admin ར Άˋ



ŗ WEB ⅃ ⅂ ⅆ ⅄ ῶ " Admin " ⅋ Ά ἐ Ό ῶ Ἱ ں Ἱ ⅋ Ά "Y ⊧ ⅂ ת ά ⅂ ת Ա ኔ WEB ⅂ ˛
ᾰ "Y ⊧ ⅂ ת ˋ ẹ WEB ⅃ ⅂ ⅆ ⅄ ῗ ≡ ῶ "Y ⊧ ⅂ ת ῗ Ἱ ⅃ ˘ ₅ ڶ ᾅ

ɡ 1-78 guest ⅋ Ά ˋ

˚ ˲ ⅋ Ά ˋ ẹ WEB ⅃ ⅂ ⅆ ⅄ ῗ ῳ ˋ ẹ Ḽ ≡ ῶ "Y ⊧ ⅂ ת ῗ

Telnet ⊦ ⅃

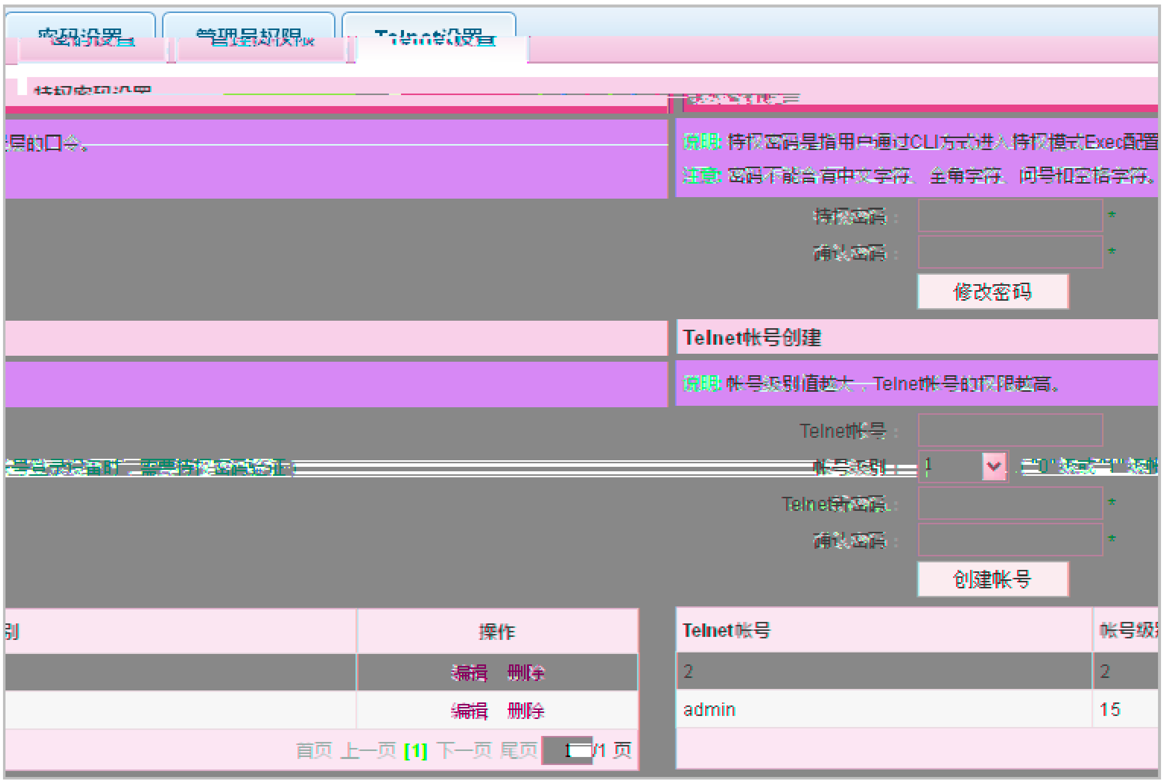
Telnet ŋ ῗ TCP/IP ŋ ˜ ῗ Internet ڡ ⅂ ˋ ẹ Ό ‰ ŋ ˛ Ά Ā ⅆ ⅂ ⅋ ᾰ ŋ₅ ţ ɔ Ů ⅋ telnet ⅂ ẑ ق ì Ό Ẋ ŋ telnet ⅂ ẑ ڙ ف ŋ Ό ظ Φ ő ΄ ì ŋ Ό ί ڙ ˉ ˛ Ȁ Ď telnet ʕ ọ ؏ ڙ ⅋ Ά Ḽ ꜖ ˋ ẹ Ό

Telnet Ֆ ⅃ ˛ ὺ ˲ Ḽ Telnet ű ⅂ ת

˲ Ḽ ῗ ق ˲ ₩ Ā Exec ٻ ⅃ Ṗ ڿ - ڝ ⅋ Ά ő "Ḥ Ֆ ⅂ Ά ῶ CLI Ḿ Ֆ ⅂ ٻ ⅃ ڤ Φ ⅂ ת

Telnet ű ⅂ ת ῾Ḥ'Y ᾰ ˄ Telnet ű ⅛ ű ᾆuḾ Ȥ₅ ţ ⅃ Ḽ ݭ ŋ ὺ Ֆ Telnet Ό ῗ ڙ ˟ ő WEB ᾰ Telnet ű Ἱ Ό ₅ Ȁ ڙ ű Ḽ ˋ ẹ Ֆ

ɡ 1-79



1.3.8.3

… WEB … 50 …

… WEB …

1-80

… 50 …

… "bin" … WEB … "upd" …

… flash …

1.3.8.4

1-81

“.text”

“config.text”

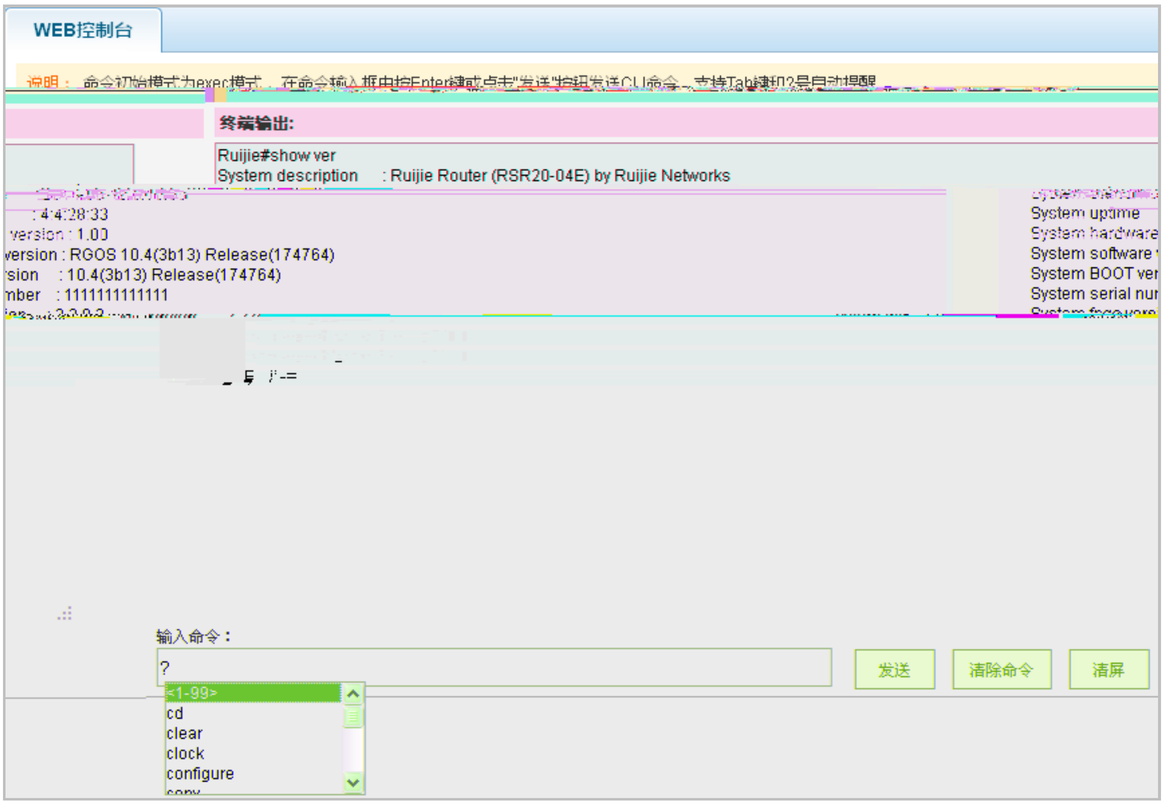
“config.text”

1-83

1.3.8.5 WEB

WEB Console WEB CLI

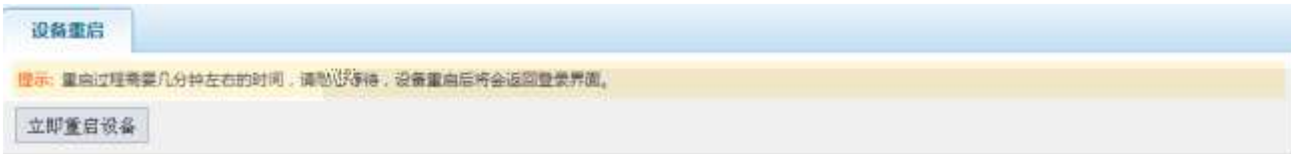
1-84



1.3.8.6 ⊦ ڮ

ᕮ “ ৭ پ ₯ ꜝ ” Ṅ ₯ ꜝ پ ̀A پ ̀A ، ꞁ 2 ټ ṫ H ژ ɪ̂ Ω ژ ꞁ Ḝ ῾Ḥ Ḙ ₯ ꜝ پ ᾰ Ṅ₅ ˋ WEB ᠠ / پ چ WEB ռ - ҏ ₌

g, 1-85



1.3.8.7

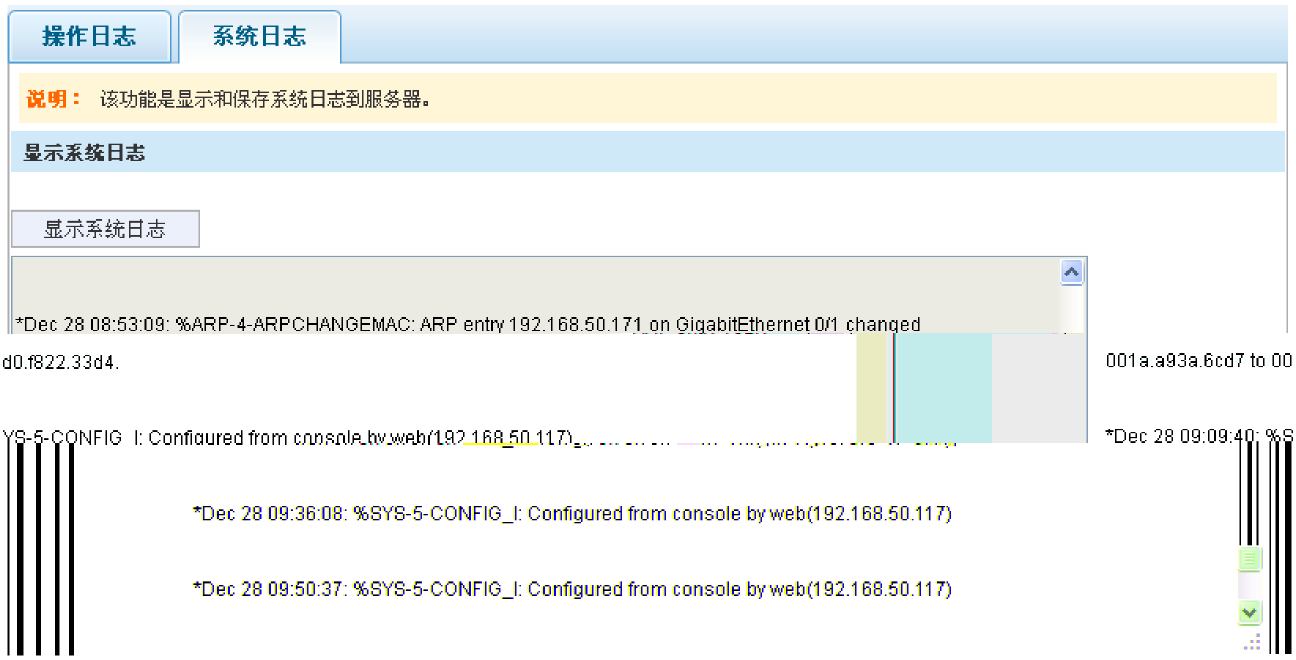
῾Ḥ ή Ő ʟ ẹ WEB ῾Ḥ ʟ ẹ ⅝ ḅ ꞁ ̀A ˋ ẹ è پ ܠ Ṁ پ ܠ ᠠ WEB ῾Ḥ ڃ Ụ

g, 1-86

ϟ ⅎ

ˠ ⅄ ή Ő ʟ ẹ ȸ ˡ ȝ ˠ ⅄ ή Ő ή Ő ˧ ᾰ ὦ ˠ ⅄ ȟ ℅ ḅ ì ἐ ˧ IP ᶌ · ῷ ᶌ

g, 1-87



1.3.8.8 ڗ ≡

Ping ڗ ≡

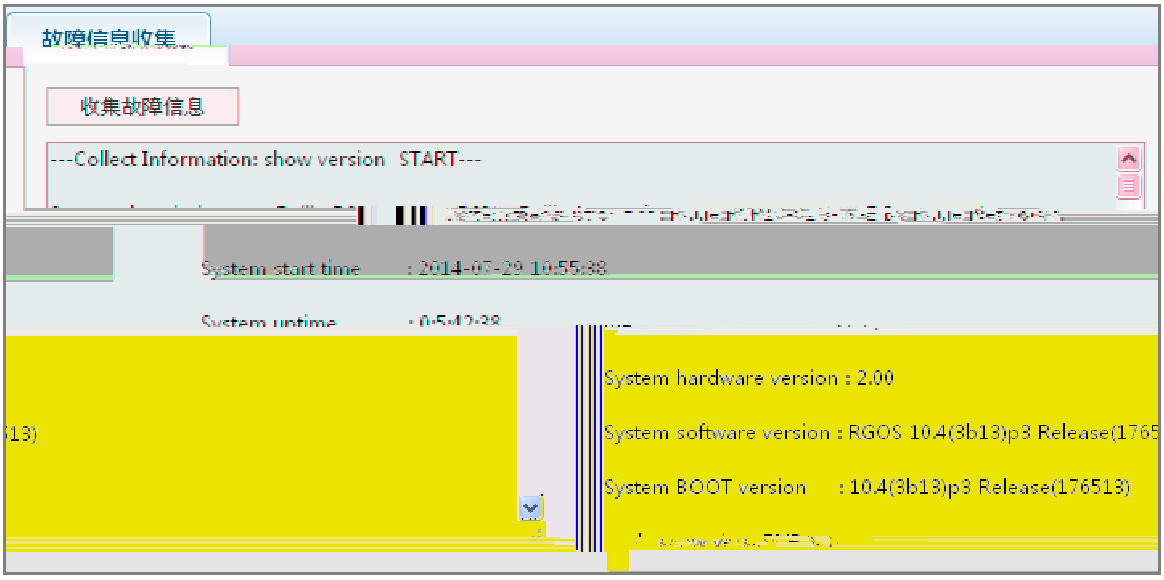
t ₅ ╜ ֆ ꜝ ΄ ȿ ҳ ĩ ̈Ω̰̃Ω ڙ Ẹ א “ Ế ấ ɯ

5 ̈Ω̰̃Ω 1 ڙ

1.3.8.9 ج ڃ

ῴ ٻ Ụ ῲ ؤ ˛ ĩ ῲ ؤ ф ៖ ﭖ ˛ ΐ Ὼ Ὼ Ụ Ḛ ф ៖ ៖ ῴ ٻ Ḥ ڤ Ụ ῃ ᵍ Ụ ˚ ɑ ẁ
ɹ ʎ ʎ ĭ ʻ Ẋ ῇ ɨ

g‚ 1-90



1.3.8.10

ẁ ἑ ĩ ʔ Ά ώ ῤ ɨ ẁ ἑ ΎΫṀ ʔ Ά ﭖ ɹ ʔ ф ៖ ʔ Ά ɐ g‚‰ ʒ ἑ ѐ ٦ ɔ Ů
ऽ

g‚ 1-91

1.4

1.4.1 Ѵ

ǎ ǒ à ȷ ḭ Ä ۆ ێ ώ " ꞵ ɻ ḭ Ȯ " ╙W ḭ Ä ꞵ WEB ⅄ / " ꞵ ɻ ḭ Ä " ج ì ő ǎ Ȯ ╙ ¨ Ḇ ȷ ẁ ḭ Ä Ϊ Ẉ ΐ₅ Ṅ Φ ʒ ⱴ ꞵ Ẉ ḭ Ä ώ ^ ˥ Ȯ ḳ ḅ ꞵ ɻ ℶ ƨ ʒ Ẃ ȣ ێ ǎ ⅄ Ḣ o ʒ ǎ ⅄
⅄

ġ 1-92WEB ` ẹ ꟼ

ġ 1-93 WEB ⅃ ˥ ث ̈

g, 1-94 `O W

1.5 Ᵽ

1.5.1 ٛ

ۣ ḍ ڧ ٦ ừ ̆ ỄṈ א ῶ ḭ Ἀ ꝑ Ḡ Ꮭ ╞ η ő Ա ڐ WEB ɹ Ί ٨ ʎ ʿH ῶ ḯ א ῆ א ڧ ¯ ؞ ظ Φ ḍ ṇ ؞ ̄ I Ọ ḍ Ṿ ̔ ẽ

1.5.2 ̂

ˑ ╞ η ⱱ ̈ Ά ه ẙ ٩ ̔ ٩ ḻ ʎ ڧ ʎ WEB Ṿ ̔ ٨ ḳ ớ ڐ ێ ؎ ĩ ʅ IE ╞ η ʿH Ḛ ɹ ̎ Ĭ ̃ א ầ Ẃ ʿH ٹ ཀ ḳ ₩ Ã ḯ ɹ ầ Ẃ Φ

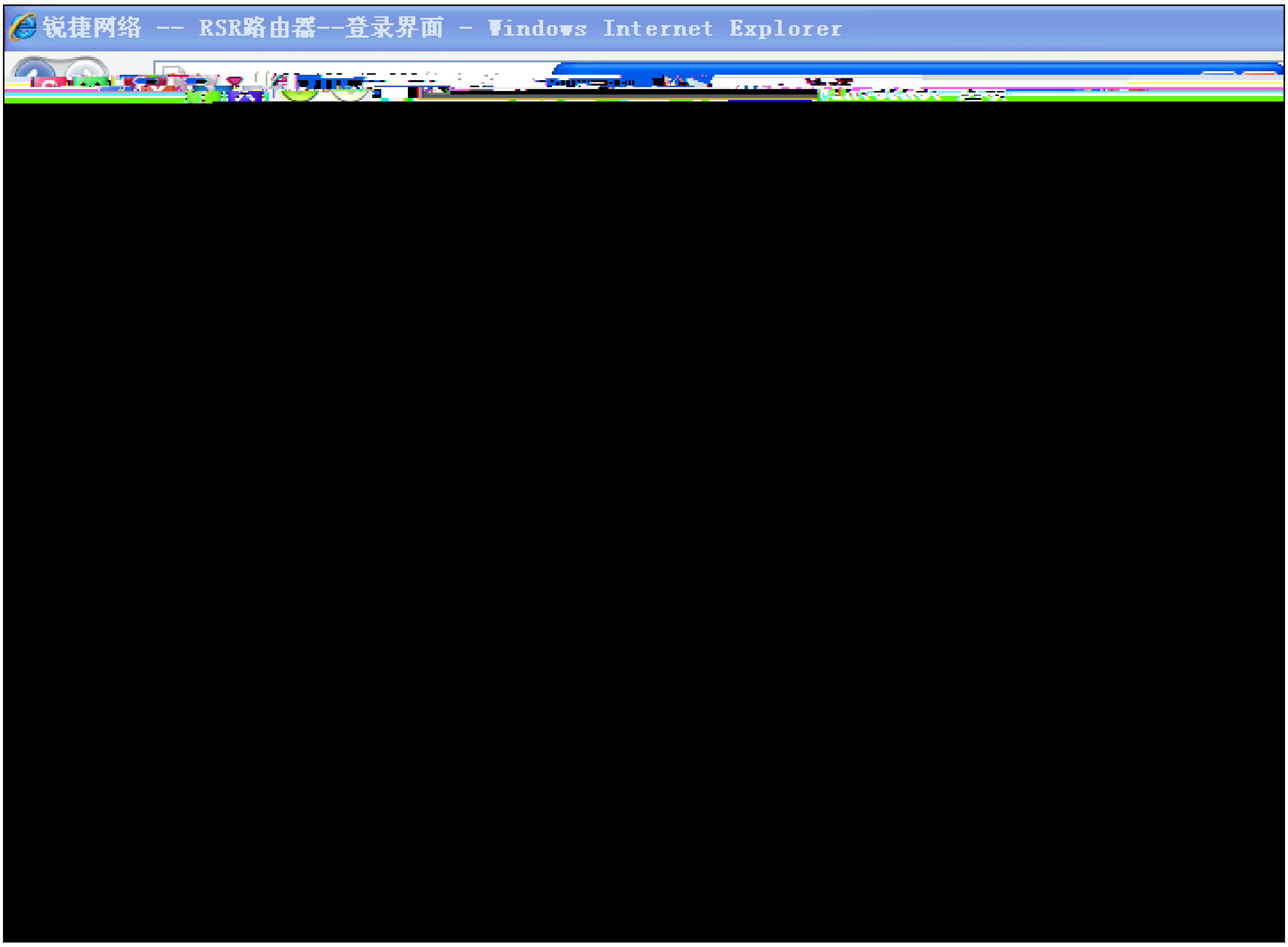
ꞡ 1-96 ḳ ₩ Ã

ʅ IE9.0 ặ IE10.0 Ա ڐ WEB Ί ת ٨ ʎ ʿH ٹ ̎ CPU ḯ ầ Ẃ ཀ ḳ ₩ Ã Ḝ ╞ η ṇ ầ Ẃ

1.5.3 WEB [illegible]

WEB [illegible] WEB [illegible] IE [illegible]

[illegible] 1-97 IE [illegible]



[illegible] WEB

1.5.4 WEB [illegible]

1 [illegible] PC [illegible] Ping [illegible] WEB [illegible] WEB [illegible]

[illegible] 1-98WEB [illegible]

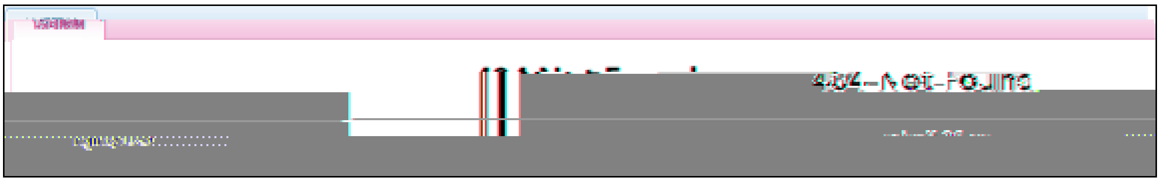
```
Ruijie(config)#show service
ssh-server     : disabled
telnet-server : enabled
web-server    : disabled
web-server(https): disabled
snmp-agent     : enabled
```

“ disabled ” ˝˜ WEB ̀O ʹ Ȁ ﺔ ɭ ﺕ “ enable service web-server all ” Ȁ WEB ̀O

ꜟ 2 ٽ PC ꜟ́ Ping ٻ ֆ ꜝ ڤ̀H ﺔ ɭ ₅ꜟ ڧ ỉ ֆ ꜝ ￼ ỉ ˝Y˜ ♂ ٽ ỉ ￼˝Y˜ ♂ ٧ ٿ ₅ꜟ PC ٿ ꜝ ￼ IP
ʂ ҳ ٽ˝Y˜ ♂ ʹ ٧ ₅ꜟ ⅃ ⅎ ꜟ̈ ọ̇ Ḅ ᾰ̃ ˜̈ ˝Ω ⅃ ⅎ

ꜟ 3 ⅃ ˜̈ ڤ ﺇ “ 404 ” ꜟ́ WEB Ṯ ⅎ˝Ω q ﺔ ɭ ˜̈ Ȁ WEB

ꞡ 1-99 ṇ̇ ⅃ ˜̈



1.5.5 WEB ٿ ﬂ

WEB ᒣ ת ⅎ ﾉ ω ת ֆ ⅃ ῶ ⅎ ﾉ ʌ ̀H ̀ ̀H ژ ɭ ᒣ ת ̀ WEB ᒣ ת ⅎ ﾉ ٽ ꞵ 10 ٿ ṇ̇ ˝Ḥ ⅎ ﾉ
ő ₅ ̀ ٽ ꞵ 10 ٿ ῶ˝Ḥ WEB Φ ̀H ژ ɰ˝Ω̣ ₅ ▌ پ ̀A ɰ ̀H

ʌ ̀H ̀H ژ ω ת 10 ٿ ꜟ́ ἐ ώ̣

1.5.6 ڗ ˛

ڗ̆ ڗ ỉ ȁẂ ɭ ℵ ꞵ ڗ̆ ڗ ỉ ڝ ^ ̀H Ĭ ˜ ڷh ڗ̆ ڗ ỉ ᾰ̃ ᵘ ڷh ڗ̆ ڗ ỉ ꜟ́ Ĭ ˜ ڤ ꜟ̈ ﺇ WEB ꞵ ֆ
ɰ ˛ —̀H ں ڗ̆ ڗ ỉ ￼ Ĭ ˜ ˝Ώ ῳ ^ Ĭ ˜ 18 ڗ̆ ڗ ỉ ں ڗ̆ ڗ ỉ ꜟ̈ ˝Y Ł ˘ ẖ￼ ﺕ ʄ ˘ ڤΦ ʻ ệ ￼ ɺ
ʻ ṵ ḅ

PPPoE ɰ 4 Dialer ڗ̆ ڗ ỉ

SVI ᵘ ⅃ ɰ 2 SVI ỉ

VPN ˝O ɰ 3-5 Virtual-PPP ڗ̆ ڗ ỉ

3G