启明星辰

k ” ĭ ؤ ƥ

Ṫ ⊢ ǐ ⅃ ⅃ ʎ Ḡ ȷ ˜ Ά ˆ ’



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1.1 ◓ ⺆ ⺆ ˘↑

Industrial Internet Consortium(IIC) AllSeen Alliance Open Interconnect Consortium(OIC) 6

Accenture

ﻝ Ṫ í ﻝ ﻵ ט ף ﻝ ƥ ﻝ [illegible] ﻝ ﻥ ف ì Ḛ Ḿ ﻝ ﻥ [illegible] ˚ ó ˜ ح ⅝ ﻥ Ṫ ₅ ט ק

Ụ ק ﻵ ﻥ ʠ ˜ Ặ ɔ ̈Ọ ̃Ω

ú ǐ ſ ת ₶ ´ щ ﻵ Ṫ ú ǐ ʐ ɻ щ ﻵ ᶻ ̈Ọ ̃Ω ﻵ Ȧ Ḥ [illegible] Ẓ ɾ ɨ ǐ ﻝ Ф

ţ ⊐ Ẉ ᴶ [illegible] ú ǐ ſ ת ᵪ ∂ ʌ ᔑ Ḿ ₸ ᵩ ɨ ̈Ọ ̃Ω ⊐ Ụ ف Φ ‘ ⊐ ſ ת Ẋ ⅃ ᵀ ᶻ ̈Ọ ̃Ω

Ḥ ■ ̈Ọ ̃Ω ĩ ˈ ᵖ Ṫ ɨ ǐ ﻝ [illegible] / Ọ ǐ ד

1.3 ▬ Λ ﻥ ą̈ ϒ

ʃ Ķ “ ″ ” h̃ ﻥ ļ ̃ ώ ̦ “ ʌ ī ɨ ǐ ﻝ Ầ ע Ẓ ɾ ” Ṅ ₇ ד ɾ Ặ ọ ɾ в ɲ ⊐ ‰ ́ [illegible] ﻥ ò ט ɨ ǐ ﻝ ª Φ ª ﻭ ³ Ẓ ɾ ʐ [illegible] ǐ ọ ° ◊ Ꮒ ⊐ Ẓ ɾ в ª ọ ص

Ầ ע Ẓ ɾ ˜ ... Ṫ ϒ ò ט ﻭ ą̈ ̦ Ȧ Ở ⅃ ė ą̈ ŋ ﻵ ᵀ ﻭ ą̈ Ẓ ɾ ɻ ̃ Ấ ̂ ف ﻵ ج ڎ

″ ﻥ ώ ح Ụ ╥ ´ ⊐ ↓ ɨ Ȯ ɲ ǐ ד ώ ″ ᵋ Ụ ⊐ ˜ ϒ ת ↨ Ẉ

2013 ẉ 2 ώ 5 ή ʃ ɲ ʊ ʌ ų ʃ ɲ ʊ Ꮒ ò ف ɨ ǐ ﻝ õ ẑ ß ʌ ī [illegible] Ỿ Ṁ Ỿ ð

Ʊ ᵱ ᵽ ώ ɨ ǐ ﻝ ﻵ ﻥ Ụ Ḡ è ƥ ☺ ƥ ڭ Ứ Ớ ᵪ ɾ Ặ Ậ Ṁ ɾ ồ ɻ ̃ ƥ ᵍ ⊐ ̦ ώ ̦

Ḡ ˡ í Ặ ק Ḡ Ỿ ╞ ᵱ Ụ ﻥ ﻵ Ḡ ϒ ת ⊐ ̈Ọ ̃Ω ï ɾ Ặ ɨ ǐ ﻝ ᵱ ᶻ Ẓ ɾ ⊐ ﻥ ﻵ

[illegible] Ḡ ⇊ ̃ ι ɻ ̃ ⊐ Ḡ گ ï Ṫ ڎ ɨ ǐ ﻝ ᵱ ᶻ ᵍ ˜ Ф Ạ ᵱ ι ח ﻥ ﻵ ⊐ ᵱ ᵽ ؤ

³ Ẓ ɾ [illegible] Ḡ ˡ í

2017 ẉ 1 ώ 17 ή Ṫ ⊐ Ụ ק ф ò ט ɨ ǐ ﻝ ß õ ẑ ʌ ī ˙ ḧ Ụ ọ

“ ″ ” h̃ ɨ ǐ ﻝ ʻ q ƥ ʌ ų [illegible] ʜ м ʌ Ụ ọ Φ ʌ ī h̃ 2016 2020 ẉ

[illegible] ọ ˜ ʌ ų Ụ ọ Φ ʌ ī h̃ ɨ ǐ ﻝ ʻ q 2016 2020 ẉ ؤ ﻹ ɲ ķ h̃

Ṅ ώ ″ Ḡ ڎ ǐ ד ᶻ ļ ח ώ ̦ ò ف ʜ ڃ Ḡ Ḥ ̣ ʌ ⊐ ק ⊐ ã ﻵ

Ḡ ڎ ﻥ

[illegible]

[illegible]

[illegible]

[

ź ¡ ˀ ˊ ˇ ˙ ˝ ˛ ˚ ˜ ˟ ˠ ˡ ˢ ˣ ˤ ˥ ˦ ˧ ˨ ˩ ˪ ˫ ˬ ˭ ˮ ˯ ˰ ˱ ˲ ˳ ˴ ˵ ˶ ˷ ˸ ˹ ˺ ˻ ˼ ˽ ˾ ˿ ̀ ́ ̂ ̃ ̄ ̅ ̆ ̇ ̈ ̉ ̊ ̋ ̌ ̍ ̎ ̏ ̐ ̑ ̒ ̓ ̔ ̕ ̖ ̗ ̘ ̙ ̚ ̛ ̜ ̝ ̞ ̟ ̠ ̡ ̢ ̣ ̤ ̥ ̦ ̧ ̨ ̩ ̪ ̫ ̬ ̭ ̮ ̯ ̰ ̱ ̲ ̳ ̴ ̵ ̶ ̷ ̸ ̹ ̺ ̻ ̼ ̽ ̾ ̿ ̀ ́ ͂ ̓ ̈́ ͅ ͆ ͇ ͈ ͉ ͊ ͋ ͌ ͍ ͎ ͏ ͐ ͑ ͒ ͓ ͔ ͕ ͖ ͗ ͘ ͙ ͚ ͛ ͜ ͝ ͞ ͟ ͠ ͡ ͢ ͣ ͤ ͥ ͦ ͧ ͨ ͩ ͪ ͫ ͬ ͭ ͮ ͯ ͰͱͲͳ ʹ ͵ Ͷ ͷ ͸ ͹ ͺ ͻ ͼ ͽ ; Ϳ ΀ ΁ ΂ ΃ ΄ ΅ Ά · Έ Ή Ί ΋ Ό ΍ Ύ Ώ ΐ Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ ΢ Σ Τ Υ Φ Χ Ψ Ω Ϊ Ϋ ά έ ή ί ΰ α β γ δ ε ζ η θ ι κ λ μ ν ξ ο π ρ ς σ τ υ φ χ ψ ω ϊ ϋ ό ύ ώ Ϗ ϐ ϑ ϒ ϓ ϔ ϕ ϖ ϗ Ϙ ϙ Ϛ ϛ Ϝ ϝ Ϟ ϟ Ϡ ϡ Ϣ ϣ Ϥ ϥ Ϧ ϧ Ϩ ϩ Ϫ ϫ Ϭ ϭ Ϯ ϯ ϰ ϱ ϲ ϳ ϴ ϵ ϶ Ϸ ϸ Ϲ Ϻ ϻ ϼ Ͻ Ͼ Ͽ

2011 ѵ Ό 2011 ѡ n ƒ -170 G ” ѝ Ӏ ӎ ӧ ӵ Ӫ Ӆ Ӈ

Ķ ҏ Ү ӏ ˙ ҏ ” ҍ ӆ Ӈ Ӈ

2013 ѕ ѡ ˝ ѕ ѕ ƒ ˜ ª ѕ ѵ Ҍ Ү • ɹ ç ɹ ɳ ƥ “ ” ɻ 1 ∧ ų ɟ ð ị ī ˜ þ ŧ

° ª SkyJack H ” g Ф ↓ ŧ ѝ ǐ ҙ ḧ Ẋ ӏ ˙ ҍ ғ ӷ Ҭ ѝ

ɻ ă ˈ ሀ ú ǐ ė ¨Ң ӏ “ Ồ ѝ ã ƪ ”

2014 ѡ Ḡ . Ү ^ ∧ א ≠ Ā ˜ I Tesla Model S ҷ ʒ ∩ ҷ Ҙ ŧ Ү ž è ƥ Ф ɯ ◖ ╓ Ї ◖ ╓ ˡ ˀ ѽ ѻ ă ˡ ҏ Ү ӏ ˙ ҷ γ ύ ¨EՈ ӧ

ɡ 1 WannaCry | ⅵ ɔ̄ ⅜

ỳ ᵛ ⁞ WannaCry | ⅵ ɔ̄ ⅜ Ṁ⁷ Ṉ Windows ⅵ ⅈ ɪ̈ Ä ǎ ᴘ ᴴ Ä ᴸ

ʾ ´ ⁞ ĩ ɯ ⅵ (PC) Ḡ Ḳ ̈Ỵ ̣ ⊢ ĩ̈ ⅃ (IoT) ǎ ´ ‰

Ɔ̃ IoT Institute ĩ Ṁ ؛ ỳ س ḭ ɒ̣ Ḷ ⁞ ḗ í ˙ Ḳ ⁞ ở □ ᴴ ɭ W ⸗

ṏ ≡ ũ ↔ ɑ̃ ɑ̈ س ḭ ⸗ ῷ` ɔ ⅃

ɣ˜ Ṗ ɣ ủ ɣ˜ Ṗ ɻ ʜ ⊐ ɣ ʰ RFID ↰ ɣ˜ ₱ ᵻ ɣ ủ ف ɣ˜ ₱ ᵻ ɣ˜ Ṗ ɻ ʜ ژ ˜ ˈ ˜ ɳ ɳ Ẃ ŋ̀ ↰ ɣ˜ Ṗ ɻ ʜ ĩ Ṅ ɣ˜ ₱ ᵻ Ä ف ژ ˙ ̈Ω̃Ω ∫ ת Ọ ʜ ჯ ˛ Æ ↰ ɒ ɣ˜ Ṗ ɻ ʜ E ĩ Ḿ ɣ˜ ̈Ω̃Ω ჯ ∧ ɨ ɔ ד ′ ă ủ ĩ ɣ ˜ Ṗ ɻ ʜ ˡ Ḿ ̈Ω̃Ω ف Φ ჭ Ę ∫ ת ̈Ω̃Ω ᵀ ↰

ɻ ʌ Ṗ

ɻ ʌ Ṗ ɭ ẖ ɤ ɨ ɻ ̈Ω̃Ω Ụ ⊐ í ˙ Ụ ᵇ ɳ ɣ ủ ĩ ɻ ↰ ʊ ɻ ɾ ɻ ↰ Ẃ ɣ ủ ˇ ↰ ª ɻ ʌ ᵀ

Ƶ ɾ Ṗ

Ƶ ɾ Ṗ ″ Y Ḿ ɣ˜ ̈Ω̃Ω ف Φ ؤ ∫ ת Ẉ ᴶ Ʊ Ƶ ɾ ̋Ḥ ĩ Ƶ ɾ ̀Ο ת ώ ᵍ˜ ̋Ḥ ̀Ο ת ʌ ɣ ủ ‰ ⅋ ɹ ‘ ̈Ω̃Ω è ̈Ω̃Ω ∫ ת ̈Ω̃Ω ↿ ת ↰ Ḿ ᶻ ʒ ɨ ɨ ɻ Ƶ ɾ ↰ ʌ ⁉ ب Ƶ ɾ Ṗ ˇ ĩ ɯ ↰ Ẉ ᴶ ĺ Ẉ ᴶ ת ɳ ɣ ủ ؤ ᵀ | ɣ˜ ɻ ʌ ˜ ɧ ̈Ω̃Ω è Ẋ ↿ ת ف ̈Ω̃Ω ↿ ת ɻ ↰ ɾ Ä Ḿ ف ̈Ω̃Ω ւ ڂ ⊐ ɾ ɜ ấ ↰ ɻ ɯ á ւ ڂ í ˙ ↰ ˙

2.2 ▬ ʌ ʌ ↰ ⍵

2.2.1 ▼ ʌ ↰ ⍵

Ṫ ɨ ɨ ɻ Ƶ ɾ Ṗ è ɡ Ḡ ḍ ŭ ɭ ⍵ ˇ Ά ⎯

a) ڷ ↰ ḍ ŭ

ڷ ↰ ⎪ ◖ ڷ ↰ ⎪ ؍ ĩ ″ Y ɾ Ä ڷ ↰ Ụ Ȳ ؍ ɻ ⍵̀ ă ḅ ɾ Ä Ɠ ب Ụ ځ

Ụ G ﻉ Ƶ Ḅ ƀ Ḻ ↰ Ụ

Ủ Y ˢ ت ڷ ↰ Ụ n ת ă ˡ Ḿ ɾ Ä ف Φ Ủ Y ˢ ت ḅ ⍵̀ ă ˡ ɳ ص ‰ ↰

ɻ Ụ n ת ‰ ↰ ɾ Ä Φ ت ẵ ă ɾ ‰ ⅋ Ụ ˡ . ḧ Ẋ ˢ ت ⎯ ي ɨ ß ̈Ω̃Ω ؍ ʒ ɻ Ụ ↰

b) n ▬ ɾ

ɨ ɨ ɻ ˡ ĺ è ɡ n ▬ ɾ ⍵̀ ḅ ˚ | ɾ Ä ɾ ˙ á n ẵ ă ᵀ | ɾ Ä ɾ ˙

ḧ ⃞ n ↿

c) ɕ w

ɦ ǐ ↓ è ƥ ŋ̀ ƒ Ф ɨ ф Ф ɨ ı f̈ q ˙Y ɬ ª ɾ Ь ă ¡ ̈A ↿ ǎ ă Ƶ ɾ ˙O

n ʜ ∧ Ӡ ̈Ω ̃Ω Ụ ̈ΕΦ ̈Ḥ ƀ ¡ Ḿ ű f̈ Ḳ ṗ ƒ ̃ ¡ Ḿ ь ʊ ̃ ̌ ф ↾ ί ˙ ↓ ʎ ր

ص Ь ă ɡ ↓ ʎ ⃞ ª ↿ ˙On ʜ ı ɹ ɒ ɔ ɻ ɛ̈ Ã ̃ ̌ ф ̈A ژ

d) Ụ ! / 1 ώ

ɬ ɦ ǐ ↓ ր g ₓ ɻ ր ص ả ⎯ ^ ³ ↓ ʎ ф ↓ ʎ ὐ ` ^ ¯ Ḡ ˙ ̀ ̋ ↾ ɬ

% Ƶ ɾ Ṗ ̈Ω ̃Ω Ễ ı f̈ q ! ├ ⊐ 1 ώ

e) ˙l ̋ ⊐ ε ɲ

ր ⃞ ̈A õ v ă ı f̈ ε ɲ ǎ ˙l ̋ ` ↓ Ḣ ă ⃞ ̈Ḥ ⊐ ˙H ƺ

f) ᵽ ώ ḍ ŭ

ώ ̀ ă ᵇ ´ ‰ ẏ ˜ Ф ɨ ǎ ɦ ǐ ↓ Ƶ ɾ ˙On ʜ ʌ Ӡ Ţ ì ώ ص ⃞ ╤ Ụ ſ ̄ ̇ ₱ ح ↓ ʎ

⃞ ⃞

g) ȯ ʎ ˙On ώ ̀

˙ ⃞ ɲ - Ά Ã ĩ Ƶ ɾ ↓ ↾ Ƶ ɾ ˙On ʜ ژ ⃞ 1 Ḿ 1 ɲ - ă ƥ ɦ ǐ ↓ ↓ ↾ Ф

ɨ ̈Ω ᵢ ţ ᶻ Ę ̃ Ω ɲ ф ̈Ω ᵢ ţ ᶻ ⃞ ↓ ↾ ɾ n ˙H Ƶ ɾ ˙On ʜ ژ ɪ ᶻ h ₩ ⃞

ɲ - ت ∂ ╤ Ụ ф ╤ Ụ Ṅ Ṁ ₇ Ƶ ɾ ˙On ʜ ص ê ↓ ʎ ن ̌ ̈O l Â ∨ ȯ ʎ ˙O

n ώ ̀

2.2.2 ʎ ↾ ʎ ѽ

Ṫ ɦ ǐ ↓ ↓ ʎ Ṗ è ƥ ⃞ Ḡ ḍ ŭ ɻ ѽ ˝ Ά ⎯

a) ↓ ʎ ̈O l ⊐ ȯ ʎ ˙On ώ ̀

ɬ ɦ ǐ ↓ Ф ɨ ̈Ω ᵢ ţ ᶻ ƀ ' ن ص א õ ⃞ ɲ - Ά | Ḿ Ф ɨ ف Φ ɲ - ۵ ╚ ᵢ Ḿ ن

↓ ʎ ſ ب ĩ ı ổ ע ⃞ Ổ Ъ ĩ ᶻ ᵢ Ф ɨ ƥ Ễ ̃ ˙H ژ ภ ì ↓ ʎ Ễ ı f̈ Ỿ ſ ↓ ʎ ˙O l

ă ↓ ʎ ˙O l ʎ ώ ̀ ă Ỿ ſ ı ă Ḿ ˙On ʜ ɪ ȯ ʎ ˙On ώ ̀

b) ڑ ۞`

۞` ă ı ∧ט ڑ ۞` ê ⊦ ĭ ⊿Ф ᵵ ף ⊿Л, ⊐ ĭ ∨ı ă ă l ⊦ ĭ ⊿Ф ᵵ ᵇף ⊿Л∧گ w□ت∂ ă ᵠ Ẓ ă ê ף ⊿Л ˛ ڃئ□ Ă ă ẽ ᵠ ⊿Л Ḡ

c) ڃ ⊿Л╦Ụ

۞` ă ı ˍ ŕ ẏ˜ Ṗ ⊿Л□Ḡ ớ ∨ ≠ ₽ ڃ ף ⊿Л□ ˝Y˜ ă ê ⊦ ĭ ⊿Ф ᵵ Ă À ف ì ă ă ˛ ڃئ□Ḥ ă ᵠ Ẓ

2.2.3 ٦ ∧ ۞

Ṫ ⊦ ĭ ⊿ᴧ∨ ì Ỵ□ Ḡ ḍ ŭ ļ ۞ ˝ Ắ ⁼

a ˚ á ح ח Ф ᵵ Ụ

Ḿ Ỵ ١ ڙ□ẏ˜ Ф ᵵ ă ẏ˜ Ṗ ⊿ԋ ϒ ù ⊦ ĭ ⊿ᴧ∨ ẏ ʜ ` ₽ ⊐ ẏ ʜ ⊿ԋ ı ĺ ɋ ۞` ă ⊦ת n ă ǧ ڎ ۞ ۞` ă ı ˍ ŕ ŕ Ṫ ט ‘ ˛ ẏ˜ Ф ᵵ ¨A è □ Ḻ Ụ

b ث ۞`

Ủ Ỵ ẏ˜ Ф ᵵ ȯ ∧ ڃ ∧ ≠ ḧ□╦Ụ Ẋ Ṅ Ꞇ Ấ ê ف ˝Ω˜Ω ϒ W ف Φ Ḥ D ٧ ´ א ė Ã ĩ ۞` ă ۞ ≠ ḧ ẏ˜ Ф ᵵ گ˙ □˝Ω˜Ω ϒ Ẋ Ṅ Ꞇ ı ˛ ş ڃ ∧ ᴧ Ꞇ Ḝ ẏ˜ Ф ᵵ ă ∪ ɋ Õ ת□١ ẙ Ẹ Ủ Ỵ ẏ˜ Ф ᵵ ƿ ˝Ω˜Ω Ш ژ ث Ễ ˋH J˝O ڃ ∧ ۞` ۞ ω ḍ ŭ

c ` ₽ ₱ ح

۞` ă ף ص w ⊿ Л Ţ õ□ẏ˜ Ф ᵵ ă ẏ˜ Ṗ ⊿ԋ ı ᵇ ẏ˜ ⊿ Л ├ Ụ˙ ∧ ט ^ ٧ ė Ã□۞` ϒ ù ˇ ¦ ẏ˜ ⊿ Л ژ□ Ụ ᵇ ẏ˜ ⊿ Л ∧ ų □ث Ụ ף ۞ Ţ ∧ گ ص□˝Ω˜Ω Ụ گ □˝Ω˜Ω Ụ ٧

d Ủ Ỵ ˛ ۞`

´ ژ Ɓ ⅜ ц ɣ Ụ□۞` ف ĩ ث ⊿ ٧ ˝Ḥ ⊿ ᴧ ă Ẓ ŕ ع □ ◖ ╦ ˝Ạ Â ∨ □Ḡ

3 ◓ ⺆ ⺆ ڎ ₱

3.1 ɤ ڎ ₱

Ṫ ⊢ ǐ ⺆ Ẕ ⺈ Ṗ Ḡ ⺈ ∂ ɣ ὐ

a) ⺊ ⺋

f) گ ا ً

ώ ا ا ً ό ٠ - ِ ᴿ Ά Ḿ ₅ ţ Φ ȝ Ḿ Φ ∧ ł ▯ H ژ ▯ ا ا ً ό

ḅ ِ ص ڤ Φ ځ ɲ - ᵓ Ὴ È ⅵ ᵉ Ὴ È H ژ Ä ⅵ ٠ ٣ Ḿ Φ ∧ ł ▯ ا ً

g) i ٍ ۤ

ώ ا ٍ ۤ ۤ ▯ ٠

3.2 ٨ ٧ ڑ ₱

Ṫ ⊦ ǐ ⅄ ⅄ ٨ Ṗ Ḡ ₓ ∂ ɣ ὐ

a) ٨ ɲ -

g ٨ ▯ ė Ã Ḿ ẏ ˜ Ф ł ڤ Φ ɲ - ٣ ᶻ h ₩ Ф ł ɲ - ჟ ă ▯ ⅄ ٨ Ὸ ι Ẋ گ Ƀ ا

ǐ ▯ ȯ ٨ Ὸ ɲ ۤ Ὸ

b) ځ ٹ

ẏ ˜ Ф ł ẏ ˜ Ṗ ⅄ ʜ ⅄ ٨ ▯ ₓ ٹ ᵀ ٧ ٹ Ά Ã ḫ א ᵇ ځ ٹ

3.3 ٦ ڑ ₱

Ṫ ⊦ ǐ ⅄ ẏ ˜ Ṗ Ḡ ₓ ∂ ɣ ὐ

a) ⊦ ת Ḡ گ ĭ

ₓ ɩ ٹ ת ὐ Ạ ĭ ẏ ˜ Ф ł ă ẏ ˜ Ṗ ⅄ ʜ ٣ ¸ ă ɋ ۤ ă ⊦ ת ɳ ệ ă ᵾ ٠

b) Ա ڎ í ٠

ₓ ɩ ٹ ת Ա ڎ í ٠ ▯ A Ã گ Ƀ ٧ ` ᴾ ɋ ğ ڎ ۤ ă ᵇ Ƭ Ę ٧ ` ᴾ ă ⅄ ٨ Ф ł ⌡

ₔ ŕ Ä ă ٧ ` ᴾ Ụ

c) ځ ٹ

. ۻ ̈Ǫ̃Ø ◊ T | ό ɜ ω̃ ᾔ ό ª Ή ३ ° | ɣ˜ Ф ɬ ì ﻝ ﻵ ﺍ Ḿ ɣ˜ Ф

ɬ ڤ Φ ɕ ت í ˙ T | ɣ˜ Ṗ ﻝ ﻫ ì ڳ Ă ° | ɣ˜ Ṗ ﻝ ﻫ ف ì ﺍ Ḿ ɣ˜ Ṗ

ﻝ ﻫ ڤ Φ ɕ ت

d) ̈Ǫ̃Ø Ḻ ό

ɣ˜ Ф ɬ ̈A è ̈Ǫ̃Ø ᾆ ̈A گ ̈Ǫ̃Ø ɻ ɾ Ḻ

e) ̈Ǫ̃Ø Ḣ Ǫ ό

ﺍ ɻ ۻ ո ù Ạ گ Ƀ ɣ˜ Ф ɬ ̈A è ̈Ǫ̃Ø ᾆ ̈A گ ̈Ǫ̃Ø ɋ ۱ ᾐ

f) ˡ ɾ ό

ﺍ ɻ ۻ ո ù Ạ ï ɣ˜ Ф ɬ ḅ ۻ ɾ گ Ɠ ⅜ ڍ گ ♀ ₥ ﻧ ù Ạ ɋ ǧ ڈ ᾐ

. ᾆ ɋ Ɠ ⅜ ᾐ ̀ Ṁ ₇ Ṫ

g) ڴ ﻧ ï

ﺍ ɻ ï ɣ˜ Ф ɬ ̈A è ɾ ̈A ڴ ﻧ Ẋ گ Ƀ ɾ ̈A ځ õ ﻫ Ụ ⌡ ۽

h) ̈Ǫ̃Ø ◊ ɲ -

Ɜ ɣ˜ Ф ɬ ᾆ ɣ˜ Ṗ ﻝ ﻫ ɋ Ủ Ỵ ├ Ъ Ụ . Ụ˙ ◊ * . ﺏ ۱ ﻝ Ф ɬ

i) ̀A ﺩ ό

- ì ᾐ ̈Ǫ̃Ø ̀Ή ᾐ ό . ≡ ω̃ Ủ Ỵ ɣ˜ Ф ɬ ۽ ᾐ ص ̀Ή ╦ Ụ

4 ▲ Ⅎ ﻥ ﻥ ﻧ Ǫ ̈Ḥ ’

4.1 ŋ ̈Ḥ ’ ⊦ Ъ

ن ص ̇ ڴ ﻧ ̀ Ḿ Ṫ ﺏ ۱ ﻝ Ẓ ɾ Ṗ ﻝ ﻥ Ṗ ɣ˜ Ṗ Ḡ ḍ ŭ ڤ Φ ̧ ‘



g 3 Ṫ ⊢ ĭ ⅃ ⅃ ⅄ Ḡ Ṡ ⅃ ˜ Ά

Ά Ṡ ⊣ Ḡ Ḣ ⅃ ĭ ⊃ Ḡ Ȯ n Ẋ ⅄ ⅄ ⅄ Ḡ Ḣ ù Ạ Ṡ ʀ Ṗ ⋊ n

⊨ ⊨ Ḡ ⅄ ∂ ⊨ ⊨ ⅃ ⅄ ⅄

Ṫ ⊢ ĭ ⅃ y ˜ Ṗ ʀ ⅃ ⅄ ⅄ ⅄ ⅄ ⅄ Ạ ⅄ ⅄

4.2 ˧ ̈O

GB/T35317-2017 Ḡ ⊢ ǐ ˩ ˧˩ ˩ Ụ Ḡ ˧˩ ˥ ǐ ⌊ ∂

GB/T35318-2017 Ḡ ⊢ ǐ ˩ ỵ˜ ˩˧ ˥˧ Ḡ گ ǐ ̇H ⌊ ∂

GB/T35592-2017 Ḡ ⊢ ǐ ˩ ỵ˜ ˩˧ ˥˧ ì Ḡ ̇H ⌊ ∂

GB/T 25070 Ụ Ḡ ̇H ˩ ˩˧ Ḡ ˧˩ ˥ ǐ ⊢ ǐ ˩ Ḡ ϕɯ̇H ̈Y ᴇ

YD/T 2437-2012 ⊢ ǐ ˩ Ở ↑ " ̇H ⌊ ∂

YDB 101-2012 ⊢ ǐ ˩ Ḡ ⸗ ∂

Ụ Ḡ ̇H ˩ ˩˧ Ḡ ˧˩ ˥ ǐ Ḡ ϕɯ̇H ⌊ ∂ ề ∂ Ỵ ð ˧˩

Ụ Ḡ ̇H ˩ ˩˧ Ḡ ˧˩ ˥ ǐ ⸗ ̈V ⌊ ∂ ề ∂ Ỵ ð ˧˩

Ụ Ḡ ̇H ⊢ ǐ ˩ ̈Ω̣ ̈Ω ʒ Ḡ ⌊ ∂ ề ∂ Ỵ ð ˧˩

Ụ Ḡ ̇H ⊢ ǐ ˩ ỵ˜ ˩˧ ˥˧ Ẕ ɤ Ḡ ̇H ⌊ ∂ ề ∂ Ỵ ð ˧˩

Ụ Ḡ ̇H ⊢ ǐ ˩ ỵ˜ Ṗ ˩ ʜ Ḡ ̇H ⌊ ∂ ề ∂ Ỵ ð ˧˩

Ụ Ḡ ̇H ⊢ ǐ ˩ Ḡ v ǎ ₩ ʒ ʒ ̣ ɤ ⌊ ∂ ề ∂ Ỵ ð ˧˩

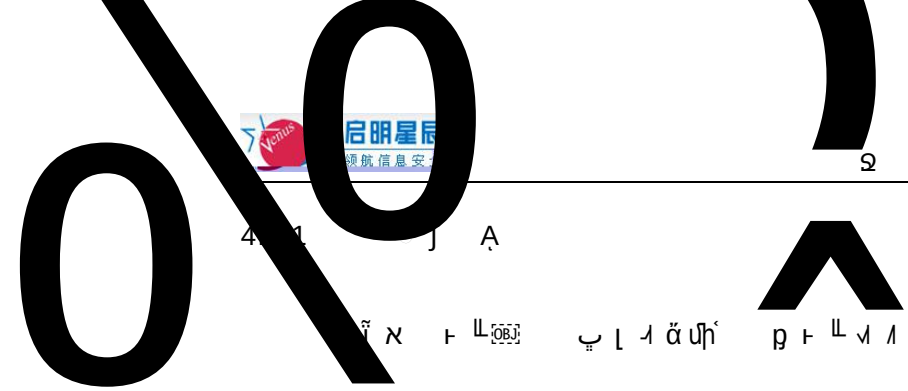
⊢ ǐ ˩ ' 2011 ẉ Ṫ ⊃ Ụ ɒ ɯ̇h ɔ ̣ ˥˧ ʊ

⊢ ǐ ˩ ' 2016 ẉ CAICT ʃ ̣ ʊ

Ṫ ⊢ ǐ ˩ ' 2017 ẉ ʃ ɔ Ḍ̇H ‰ ́ ɒ ˥˧ ʊ

4.3 ʋ Ạ

Ṫ ⊢ ǐ ˩ ⌧Φ Ẕ ɤ ̣ ɒ ˚ Ẃ ẍ ⌈ ف ̣ ̣ J̌ ⊓ ⅝ ̣ ɛ ʒ ⌧Ẕ ɤ ʃ ˜ ⁝ ̈Ω ʊ ʃ ˜ ⊓ ⸗ ᴇ ‘ ‘ ʀ ʃ ˜ ⌧Ḡ ʊ ɛ ⊃ ⸗ ∂ Ṅ Ṫ ⊢ ǐ ˩ ˩ ˩˧ Ḡ ˩ ˜ Ǻ ̂ ɒ ʃ ˜ ⌧Ẕ ɤ ɦ Φ ʒ ˧ ك

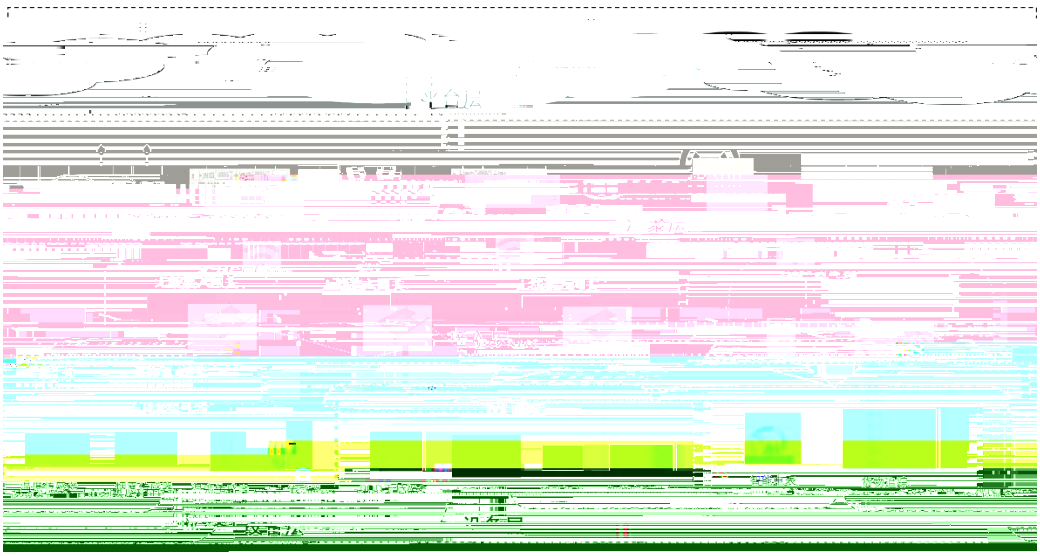




ɡ 4 ύ ΐ ʐ˜ Ỵ ɡ

4.3.1.1 ῷ

ƥ ύ ⌧ ʃ ˜ ⊢ ỉ ⌟ ⌧ Ẓ ⊢ ʅ ϒ ὐ Ẉ ʲ Ṗ ⌧ ⊢ ° ˥ ⊓ ⌟ ⌟ ⌟ ⌟ Ṗ ⌧ WiFi ZigBee 4G-LTE ⌟ ⌟ ⌟ Ḣ ỵ˜ Ṗ ⌧ ʀ ˥ ỵ ʜ ύ ΐ ⌟ ⌟ ʒ ʜ ⌟ Ḥ ϕ ʈ Ʊ ⌟ ⌟ ⌟ ‗ ƥ ɡ Ä˜

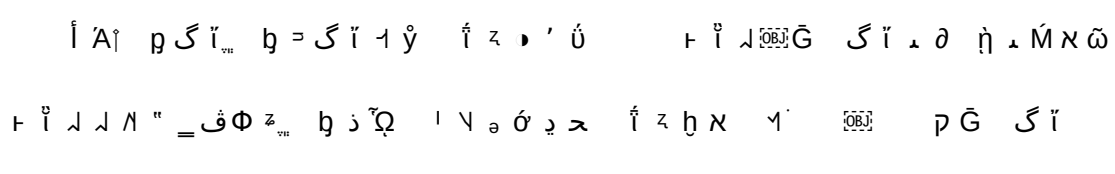


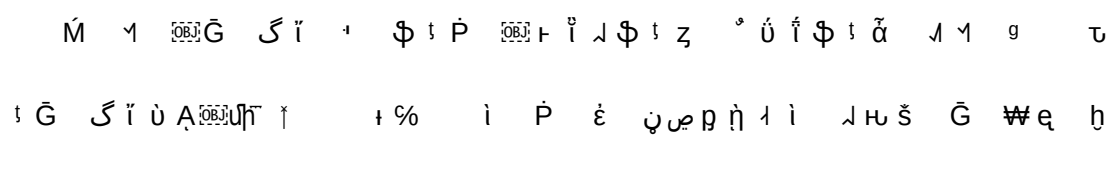
ɡ 5 Ɛ ʒ ύ ⌟ ⌟ ⌟ ‗˜ Ỵ ɡ

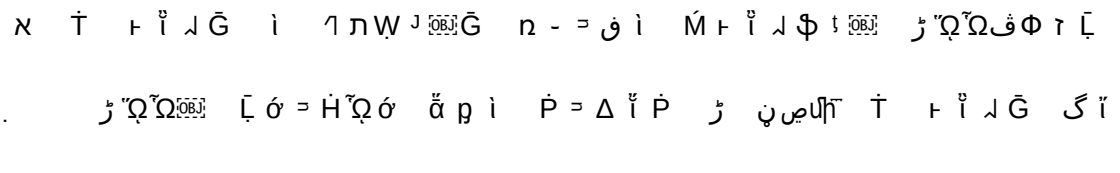
ƥ % ʃ ˜ Ʊ ⌟ ⌟ Ḡ ⌟ ∂ ʅ ˝ Ä ‗ ڤ Φ ‘ ‘

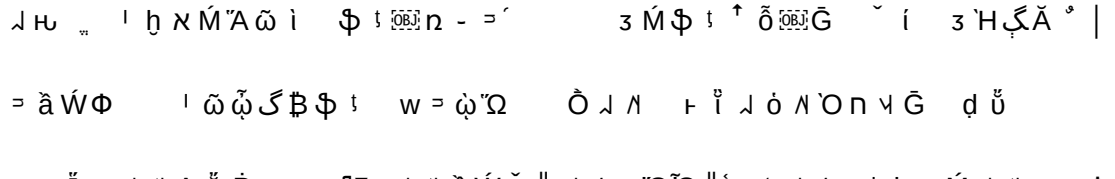
⌟ ῷ ` ‗ ˜ ⌟ ύ ᵴ ἄ ^ ⊢ ỉ ⌟ ϕ ʈ ف ϕ ʈ ⊢ ʊ ẍ ⌐ ῶ ύ ΐ ϕ ʈ ῶ ˚ ύ ΐ ϕ ʈ Ʊ ᵍ ϥu ῄ ⌟ Ä Ã ì ˙ ⌟ ⌟ Ẋ Ṅ Ὧ Ὦ Δ Ở Ẉ ʲ ⌧ ʀ

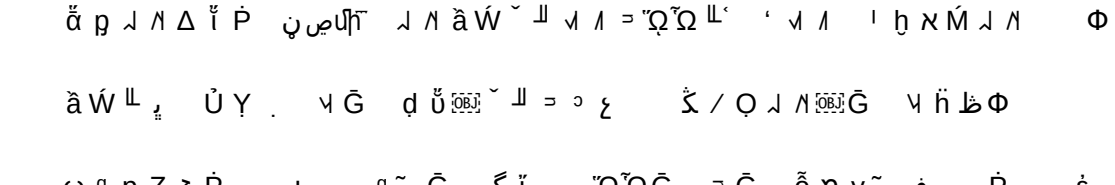
Ẓ ŧ ⊬ ⊬ ŧ % ف ⊣ ⌐ ŋ ⊣ ف ì ß ˜ Ʊ ۞ ˋ ⎯ ˚ Ẃ ẍ ⌐ ۞ ˋ ð ˙ ِ ِ ِ

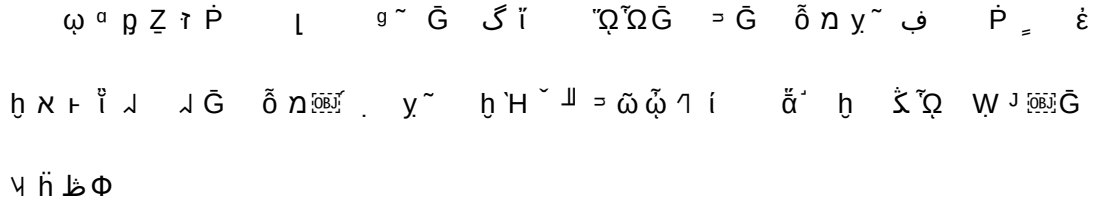




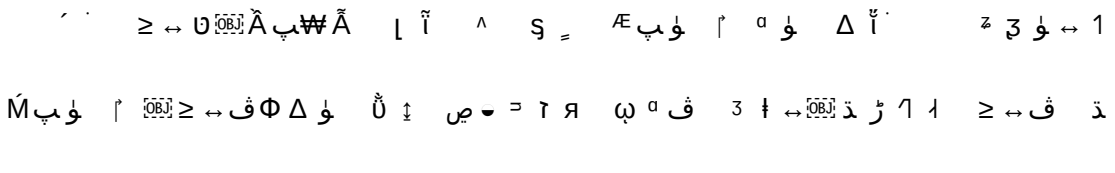


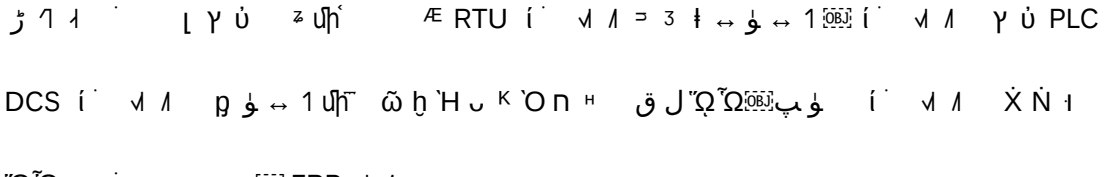


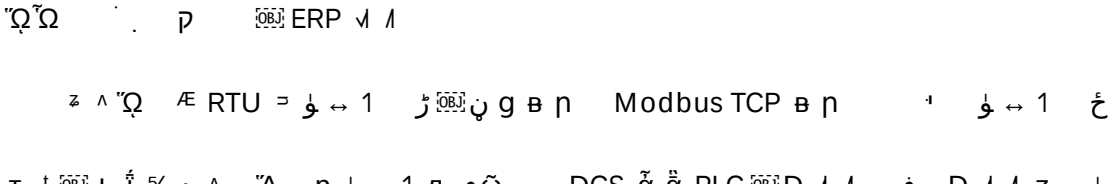


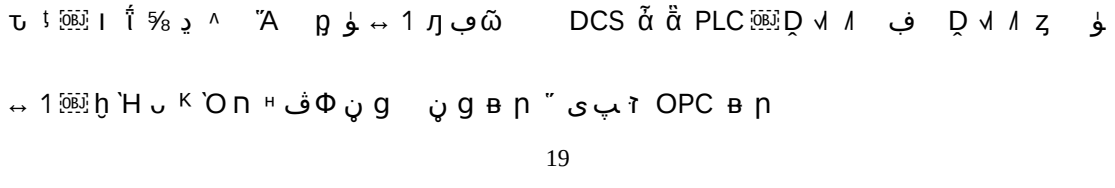






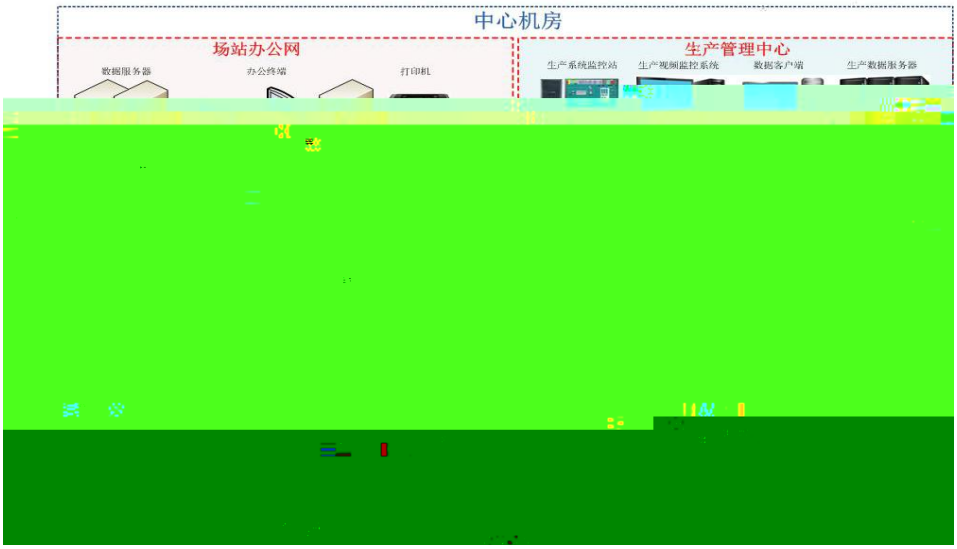




4.3.2 

4.3.2.1 ѽ

´ ˙ ≥ ↔ Ầ ᵽ ⊦ ǐ ⅄ ⋔ ∧ ⅄ ∧ ö ɛ̃ ˜ þ



g, 7 ≥ ↔ Ầ ᵽ ⊦ ǐ ⅄ ⋔ ∧ ⅄ ∧ ⅄ ⎯ ˜ Ỳ g,

≥ þ ö ɛ̃ ˜ Ỳ g, ¨Ã˜ ´ ˙ ≥ ↔ Ầ ᵽ ⊦ ǐ ⅄ ⋔ ∧ Ụ Ḡ ɹ ∂ ļ Ɣ ủ þ ˝ Á ⎯;

a) ¨Ã õ RTU ⱷ ᵵ ĩ ‘ ¨Ǫմ˜ ƥ ᴿ Æ ⱷ ᵵ ƥ ᵽ ᵘ Ɒ ɹ մ˜ ᵍ ∫ ŋ ḟ

ᵀ õ è ƥ RTU ⅄ ↿ ɑ ˚ | ì Ḡ ļ ɔ ˚ | ì ⱷ ᵵ ˡ ₩ Ό Modbus в ɲ

ˡ ɳ ص₩ Ό IP MAC ⱷ ᵵ ¨Y ⅃ Ụ ì ɲ₆ ˡ Ḣ ₩ Ό* Ẃ RTU ⱷ ᵵ ڤ Φ ì

ᵻ % ˚ | ì Ḿ Ǫ ⅄ ∧ Ḡ ȝ ʜ ı ¨Ǫ Ǫ Ḣ Ǫ ớ ⎯ ă и ḱ

b) ƫ ˋH ᴗ ᴷ ˋO ɲ ʜ ᴨ ᶟ RTU ⱷ ᵵ ژ ᵽ ᵻ Modbus в ɲ ڤ Φ ɳ ´ ˙ ŋ ɟ Ḿ

Ṫ ɳ в ɲ Ḡ گ ǐ ù Ạ è ƥ ɑ Ủ Ɣ ώ ` ¨Ǫ Ǫ ɲ Ủ Ɣ ↿ ώ ˚ | ڥ ↿ Ꞟ ɮ ↿ Ḡ

ļ ɔ

c) Ǫ ⅄ ∧ ⅄ õ ώ ⅄ ∧ Ḡ گ ǐ ù Ạ ŋ | Ḿ ᴿ ↿ Ꞟ ɮ Φ ⁼ í ˙ ¨Y ڤ Φ Ḡ ‘

‘ ⁼ ص ▾ ŋ | Ḿ ȯ ∧ ˋO ɲ ώ Φ

ɨ % ɹ ɭ ɦ ɤ ˘ ɸ ⸢OB⸣ Ṫ ɨ ɿ ɺ ɣ Ɋ

Ȧ∫ ϕщg ˙ ˜ ˛ ŋ˙H ∪ ᴷ˙Oп ʜ ˝l ق´ ώ ʌ ɨ ˝Y ˇ í ɨ ˝Ω˜Ω▯ч ļ

ǐ ل ɨ %ƥ% Ì˙Oп ʜ▯ﻝ ʌ ȷ ϱ Ẓ τ ᵵ ώ ᵍ ▯Ḡ ï ǐ ד ª˙H ɨ ˙Oп ʜ ᴿ ɻ

ﻝ ɻ ϕ ᵵ ȷ▯ڼ چ ɨ Ṫ ɨ▯Modbus TCP в ŋ ɨ %Ẓ ل ɨ ɨ▯Ṫ گ ♀ ᵯ ف

Φ Ḡ گ ï

Ṫ گ ♀ ᵯ ϕ ᵵ ˙ ώ Ḡ گ ï ǐ ד

a) ﻝ ʌ ڷ̃ گ ï ǐ ד ڼصևڈ í ˙ h„ ѿ ѽ ڷ̃ ˙Oп ʜ т ³ RTU ڭ̃ т ³ Ẹ RTU í ˙ т · ۏ ḍ ŭ ˙HṄ Ꞇ ˙Oп ʜ т ³ ف Φ ѿ ѽ ڷ̃

b) ώ ˙i ѽ` ǐ ד ɨ ڭ̀ RTU ϕ ᵵ ڼص 3G/4G ﻝ ʌ ˙Oп ʜ т ³ ف Φ ˝Ω˜Ω ڼ

g ɨ %è ƥ · ۏ ȯ ʌ ˙Oп ѽ` ▯˙ǐ Ṫ گ ♀ ᵯ ˙ ώ ؛ Ḿ ʌ ϒ ȯ ʌ ˙Oп ѽ

` ▯ѿ ѽ گ ė ɟ

c) Ṫ в ŋ ص ▬ ẙ ɹ ‘ ǐ ד ﻝ ʌ ▯ڼ в ŋ ļ ĩ ModbusTCP в ŋ Ṫ

گ ♀ ᵯ ؛ Ḿ Modbus TCP в ŋ ˙ ŋ ﻥ Ḿ ᴿ ɻ Ṫ ˝Y ▯▬ ẙ ص ▬▯

Modbus/TCP ▬ ẙ ɹ ‘ ₩ę ˙ ˜Ḥ˙Y Ẓ ɨ Ṗ ﻝ ɻ ẙ í ˙ ڼصفϒ Ả Ã ˙ -

Ṫ ﻝ ʌ ƥ گ ï ϕ ᵵ ڳ Ă ˙H ˛ ﻥ å Ẃ ڼصفϒ Ả Ã ˙ ѽ ѿ ₅▯ ᵍ

Modbus TCP в ŋ▯å Ẃ ï ă Ẋ ف Φ ѽ ѿ▯ڳ Ă ڼص Ḿ ח ⊐ ŋ گ ɨ ﻝ ʌ

▯ т ˙ á ϒ ᵀ | ח▯Modbus ˝Y ˚ ˊ ڼص Modbus TCP ▬ ẙ ɹ

‘ گ ï ₩ę ˙ á ϒ ᵀ |˜ ᵉ ɒ ڳ Ƀ ˚ | ⊐ ▯ï ă ڼص ‖ ᶻ ώ ᴝ Modbus

TCP ﻝ ʌ▯Ḡ گ ï ǐ ד

d) ﻝ ϒ ì Ḡ ₅▯ ǐ ד ɨ ʌ ˝Ω RTU ﻝ ϒ è ƥ ˙ ˜ ف ŋ ḟ ϒ ≠ ᴾ ɨ %

w RTU ϕ ᵵ ف Φ ˝Ω˜Ω ϱ ώ ח ˙Oп ʜ ˝Ω˜Ω▯Ḡ ا ڑ ے ᴝ ڼص Ṫ گ ♀ ᵯ

˙ Ḿ ᵀ | ﻝ ϒ ϕ ᵵ ف Φ IP MAC ϕ ᵵ ˝Y ϱ ⋮ ˜Ωϕ ᵵ ª ѽ ˛ Ă ĩ ε ˙

ŋ א ϒ Ụ▯ѵ ˛ ⊐ ﻝ ḧ ă ŋ א ڳ Ă ˙ ﻝ ḧ▯ ˚ | ϕ ᵵ ì ▯Ḡ ´ ▯

▬ Л Ч Ч˜ Ⱶ ü

Ḿ Ṫ ⱶ Ỉ ⅄ Ⅎ Ч ₱ ᵵ ì Ḡ Ȧ ⱡ ᵑ ᵽ ⅄ Л ⱳ Ṫ ⱶ Ỉ ⅄ Ḡ ì ⅄ Ч ⊐ Ṫ ⱶ Ỉ ⅄ Ḡ ì ⅄ Ꮒ ᵹ ᴎ Ḿ ᵀ | ⅄ Ч ₱ ᵵ ì ɲ - ⊐ گ ï

Ч˜ ü ∩ O

˳ Ỉ ₓ ⱡ ì ⅄ Л ف ì Ȯ ᴑ ᴎ ₱ ᵵ ᶎ ₓ ⱡ ᵑ ᵽ - ɲ - Ш ᵬ ă ı RTU+Ṫ ⱶ Ỉ ⅄ Ḡ ì ⅄ Ч ª Ȧ ᴵ ì Ṫ ⱶ Ỉ ⅄ Ḡ ì ⅄ Ч Ṫ ⱶ Ỉ ⅄ Ḡ ì ⅄ Ꮒ ᵑ ᵽ Ḡ Ɣ ω в ɲ ã Ч ف ì

Ẕ Ạ Ȯ ˝

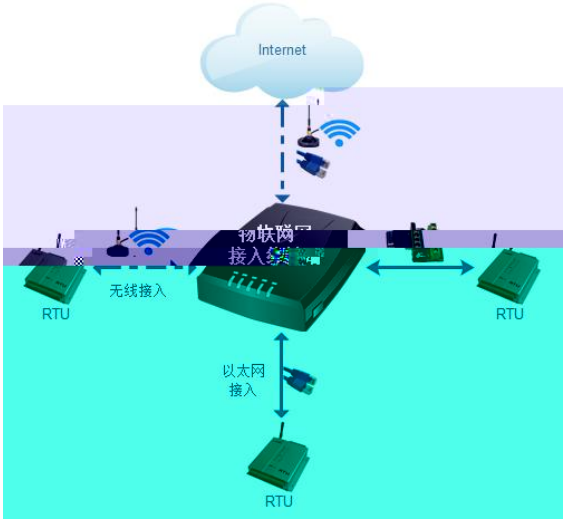
Ṫ ⱶ Ỉ ⅄ Ḡ ì ⅄ Ч ⱪ ʃ RTU ₱ ᵵ ώ Ḿ ì Ȯ ᴑ ᴎ ⅄ Ч ώ ɾ Ḷ ᵑ ŏ Æ RTU ₱ ᵵ Ḿ ì Ṫ ⱶ Ỉ ⅄ Ḡ ì ⅄ Ч Ȟ ᴵ ḫ ⱪ ⅄ ⱨ گ Ƀ Ʊ ˚ | ₱ ᵵ ì ì ª Ⱬ Ⱬ ˝ ă ė Ã Ṫ ⱶ Ỉ ⅄ Ḡ ì ⅄ Ч ª ɾ ʃ Ḷ ᛎ | ã Ч ɾ Ḷ Ḡ ڑ ᵑ ŏ Ⱬ Ⱬ ᵑ ᵽ ⅄ Л ᵑ ŏ ∧ گ ⱶ ⱶ Ỉ ⅄ ì Ọ Ȯ ᴑ ᴎ ف Φ ɹ Ḷ ɹ Ḷ ª Ⱬ Ⱬ W ⊐ ɷ ᵑ g в ɲ Ⱬ Ⱬ Ȯ ᴑ ᴎ ف Φ Ⱬ Ⱬ ڑ

♪ RTU Ⱶ ⅈ

ⅈ Ḿ ⱪ RTU ₱ ᵵ ځ Ṫ ⱶ Ỉ ⅄ Ḡ ì ⅄ Ч ف ᴵ RTU ₱ ᵵ ώ ⅄ Л Ḡ گ ï ĵ ⊤ ɣ ủ ″ Y ˆ ᵊ ᴅ ȁ Ẃ Φ ∧ א ڰ Ă ₱ ᵵ ↑ ő ₅ ▮ Ч RTU ₱ ᵵ ᴛ ᵵ ᵍ ⅄ Л Ḡ گ ï ĵ ⊤

ü ف Ч ˝ Ḥ

Ṫ ⱶ Ỉ ⅄ Ḡ ì ⅄ Ч ᴵ ώ Ꮓ ì Ȧ Ã ⱪ ⱪ RTU ₱ ᵵ Ḿ ì ɣ ủ ɷ ɻ ᶿ ⅄ RS485 ì Æ ɲ ɻ ì ᵬ Ղ ƀ ⅄ Л ă WIFI Ꮓ Ȧ Ã ᴛ ì ᶣ ḅ



ɡ 9 Ṫ ⊢ ǐ ⅃ Ḡ ì ⅄ ⅂ ɯ̄ ˜ Ỵ ɡ

ɷ ⅃ θ ⅃ Ṫ ⊢ ǐ ⅃ Ḡ ì ⅄ ⅂ ώ 2 ‰ ́ " ˘ ′ ₅ گ Ẓ θ ⅃ RJ45 ⅃ ⅄ ì

Æ ˡ Ḿ ì ‰ ́ Ϣ ì Æ Ẋ ₅ ʊ ڤ Φ ì Æ گ Ẓ ớ ʙ ƀ א ʃ RTU

RS485 ì Æ RS485 ì Æ Ṫ ע ˡ ω Ẃ ð ⃞ ì Æ Ṫ ⊢ ǐ ⅃ Ḡ ì ⅄ ⅂

˜Ḥ ̇Y ‰ ́ ⃞ RS485 ì Æ ḧ ˡ א ʃ RS485 ì Æ ʜ ˊ ⃞ ṇ ⅄ Ḿ ì

ṇ ⅃ ì Ṫ ⊢ ǐ ⅃ Ḡ ì ⅄ ⅂ ˡ ڼ ص WIFI ǎ ظ Ɂ ƀ ⅃ ⅄ ì ώ ⊃ ʌ گ RTU ʌ

˛ ⃞ Ṫ Ϣ̈ Ϣ ˋ گ Ẓ Ṫ ⅄ ⅂ ɸ ⁵ ɯ̄ ⃞ ⸗ ᴾ گ ᵀ ṇ ̌ ɯ̄ ɷ ⅃ ⅄ ⃞ ע ˡ

ɿ

⸗ ⅄ ⅄ ü ⅂ ᴾ

⸗ Ḿ Ϣ ˛ ʌ ẍ ³ ˋ ṵ ⃞ RTU ɸ ⁵ ⅄ ⃞ ḷ ₅ Ά Ã Ẽ ǧ ḫ א Ḿ ɸ ⁵ Ḡ ↑ ỗ

⃞ ḫ Ạ ɛ́ ά

4.3.3 ˜ Ạ

4.3.3.1 ѽ

ϐ´ Ụ ρ Ẕ ŧ Ă ώ ″ ㄟ ㄖ ㄏ ŭ ǐ ㄏ ९ ९ ^ ο ف R ƶ ㄏ

ㄚ ㄴ ƶ ų ㄏ ŀ ǐ ㄐ ф ŧ ì ˙ / Ọ ㄏ ㄐ ㄏ ŀ ǐ ㄐ ф ŧ ㄚ ù ˚ ŭ ǐ ㄐ ㄐ ㄟ

ㄐ ㄐ ” ˇ ≡ ѽ Ѽ ∫ т ǐ ㄒ ᴱ ǐ ր ص ㄐ ㄐ ĭ y Ѽ ѽ ǎ ì ᴩ Ḥ í Ѽ ѽ þ ὶ ˆ

Ѧ ˘ ㄟ ⊐ ŭ ǐ ㄐ ㄐ ф ŧ þ Ṫ ᴴ ㄇ ŭ ǐ Ẉ — ㄟ ف ŀ ǐ ㄐ ㄐ

ㄐ ф ŧ ώ ψ Ṫ Ά Ã Ḿ ㄐ ㄐ Ḡ ώ ˛ Ά ي ƶ ώ ǎ Ꞇ Ḡ l ɔ è

ƥ Ẋ ṕ ب

a) ŀ ǐ ㄐ ф ŧ ^ ° ὺ ǧ έ ά è ƥ ق h ì l ɔ ª Ḥ ㄐ ¸ ظ ㄐ έ ɟ

˘ Ш ր ï ȝ Ẓ Ớ ∫ т ˙

b) ŀ ǐ ㄐ ф ŧ ƥ Ά ט ‘ Ѽ Ḡ Ł ˜ ɑ ì ù ˙ ǎ w ≡ ѽ ㄐ ㄇ Ṁ ŀ ㄇ ὼ ` ㄐ ώ

⊐ w

c) ŀ ǐ ㄐ ф ŧ ˝ ى è ƥ Ă Æ ◖ ╥ ƶ ų À ὼ ㄐ Æ ㄐ Ḡ l ɔ ķ ˜ ɑ Ủ Ỵ . y

… ė ă Ồ ف ă ⎯ ă Ồ ㄐ ㄐ

d) ŀ ǐ ㄐ ф ŧ ㄐ ㄐ в ρ ^ ㄏ ^ ¯ Ẋ è ƥ ƶ ų ◖ ╥ ш ŗ ㄐ ㄐ y … Ɓ ⅜ ´ ɔ ǎ Ủ Ỵ

. ▓ ى ш ŗ ㄐ ㄐ Ṗ Ḡ l ɔ

ր ص Ḿ ㄐ ㄐ ⊐ ŭ ǐ ㄐ ㄐ ǎ w ŗ % ب — ا ´ ì ḍ ŭ ˙ / Ọ ㄇ ㄐ

ㄐ þ Mirai ր ص Ḿ Ѧ ˘ ᵇ DNS ظ Ղ ƀ DYN ∧ ∨ ƶ h ₩ DDOS ὼ ` ₇

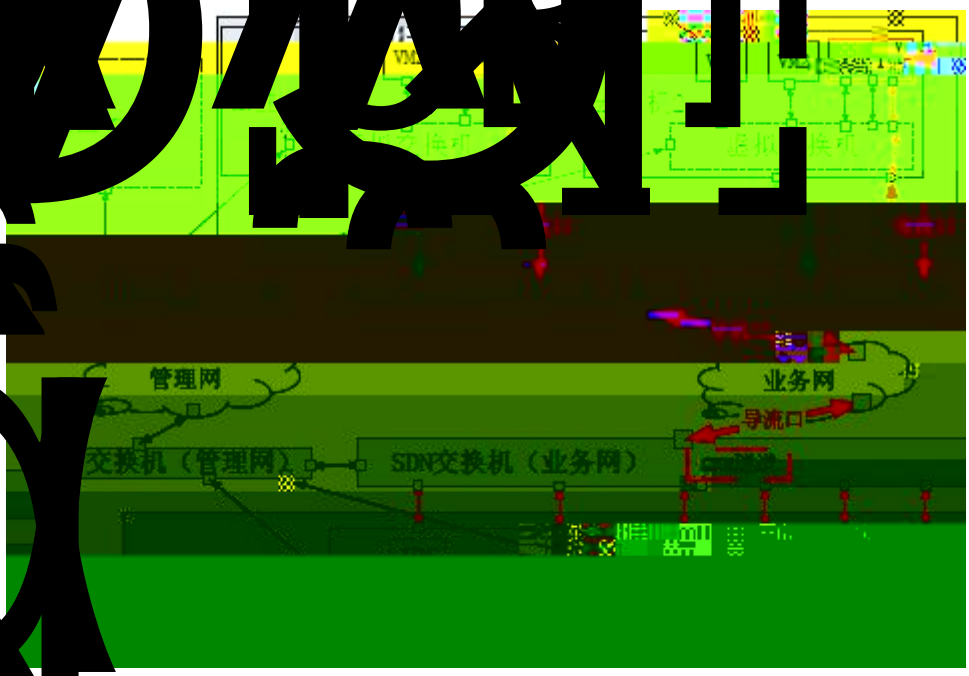
Ꞇ Ọ ˆ ƒ ㄐ ㄐ Ա ڈ ƶ h ₩ Ă ƥ • ƒ õ ƶ ȝ س ڑ ˆ ڑ ր ص ɹ ف ă ὼ /

Ọ ㄇ ὸ Ο ㄇ ᴴ ㄧ % ا ð ŀ ǐ ㄐ ф ŧ Ḡ ή ▒ ă ㄐ ㄐ Ḡ گ ï ˜ —

ŧ % ؛ Ḿ ŀ ǐ ㄐ Ḡ l ɔ ƥ ŭ ㄇ ƒ ˜ Ꞇ Ḡ ᵢ ∂ ļ ץ ù þ ˘ Ά ⎯

ɒ ǀ Ẕ ɾ ʃ ˜ ⊢ ǐ ⅃ Ḡ گ ǐ ⅃ ʜ ⅃ ɱ ˜ ₩ Ã ⌊ ɒ ⊢ ǐ ⅃ ϕ ʈ ˥ ì Ṗ پ ɾ

ث ’



g 12 Ṫ Ḡ گ ï ß ɯ̃ ₩Ã

ɲ Ǫ̈

ǐ ɬ ˝ ɖ ɸ ɬ

ı Ṅ ʌ Ġ ß ʅ Ȯ ᵒᵇᵃ Ã ʟ ȶ Φ ɲ 1-N ᵑ ʃ ɸ ʈ ɲ ` ɬ ˛ ǎ ᵒᵇᵃ

ɕ ʜ ` ɬ ᵑ ˛ ǎ ᵒᵇᵃ ˝ ɬ ˛ ɔ ɾ ˙ ˛ ɾ ʌ ï ʌ ʟ ʌ ǎ ʌ ɬ ɬ ɲ ɹ ᵒᵇᵃ

Ṵ ʃ ị ˝ A ɬ ı Ḡ Ṵ ʃ n ệ ʀ ɬ Ḡ ß ʅ ī ɳ ɷ ʅ ī ı ȍ ʌ ǎ ʀ ɬ ʅ

Ḡ ʒ Ĕ

Ȯ ɾ ᵒᵇᵃ Ḡ ɸ ɷ ɬ ɳ Ẃ Ậ ˝ Ḥ ɬ ᴱ ɹ ʅ 1~2 ˊ ɾ ɷ ʌ ˝ ˊ ɾ ˝ Ǫ ˝ Ǫ ˝ Ǫ Ọ ß ᴘ

ɷ ấ ` ʜ ɟ ɥ ᶻ ȍ ʅ ` ʜ ɟ ɥ ɾ ǎ ɧ ʌ ȍ ʌ ɯ̃ Ḡ ß

ɬ ɬ ᴘ ˝ Y ᵊ ʏ ɬ ǎ̃ ᵻ

ʊ ɷ̃ ʅ ᵒᵇᵃ ɬ ɲ ı ɪ́ ɛ ɖ ɓ

ע ˪ 🅞Ն'Ο ڑ ɦ ᵇ ╙ ᵢ ṅ | ڀ ɾ ʌ. Ḡ ₱ ᵗ ڤΦ ₅ ╜ ị ɯ ǯ

◗ ′ ч ч ᵀ h ɻ ∂ ڀ ɾ ч ʌ ʕ̃ Ạ̊ ᵅ ˡ Ṅ Ն'Ο 🅞╙ ᵢ Ṁ ˙ Ḡ ° ◊ –

ڤΦ ₅ ╜ ị ɯ ب ᵀ 🅞Ն'Οگ ♀ ᵯ ڑ ק🅞گ ♀ ᵯ ₱ ᵗ ˡ ◗ ′ ч ч ᵀ h ̓

ʜ ɻ ∂

♀. ف ʌ ᾠ ᵶ ɦگ ڎ ᵶ

Ḡ ᵝ Ն'Ο 🅞Ạ Ã ሏ ̄ ᵽ ₔ ɻ Ẉ ᴶ ώ CPU ɲ è . ` ɻ ʌ ч °

◊ Ḡ ᵝ Ն'Ο ķ ˜ 🅞Ъ ת Ն ï ˊ CPU ч ° ◊ ẽ ᵠ ת Ն 🅞ό

ǐ ˜ ч🅞Ն'Οp Ḡ ° ◊ – ת Ն ʌ ᵻ CPU ɲ è . ` ч ° ◊🅞 ï ف ¯

🅞 ч ሏ ̄ " ⁼ o ̊ ̊ Ņ Ḿ Ẉ ᴶ 🅞ɻ ᵀ w õ ᾠ ᴗ ɲ ሏ ̄ Ḡ Ն'Ο Ạ̊ Ṿ̊ 🅞 ת

و ᵢ ɭ ڑ

5.1.1.2 Ạ̈'Ο

ϒ

Ṫ ̈Ọ̃Ω ɾ Ḻ ḧ ⁄ Ọ ᾠ ẏ ̈Ọ̃Ω ɾ Ḻ ´ ˙ ɻ Ẓ ɾ Ṫ ᵻ ǐ ɻ ̈Ọ̃Ω ẓ ɾ Ḻ گ

⌈ ᵢ

ف ʌ ⁴

å ⁼ ᶻ ̈Ọ̃ΩḠ ̈Ω ɻ ʜ

å ⁼ ᶻ ̈Ọ̃ΩḠ ̈Ω ɻ ʜ ɻ ɾ ̃ ڑ å ⁼ ᶻ ̈Ọ̃Ω ڑ🅞Ḡ ̈Ω ɜ Ꜧ ڀ ɾ Ն'Ο p

̈Ọ̃Ω Ḻ ă ɻ Ậ ɜ Ḡ ʜ ǐ ǃ Ĭ 'Ꜧ ḫ א ɲ ڑ ᶻ ̈Ọ̃Ω ḫ 'Ꜧ Ḡ ̈Ω ɜ Ꜧ

ᶻ ̈Ọ̃Ω ڑ Ů ˝ ɾ ɾ Ḻ ɻ ʜ

ڀ ɾ Ů ˝ ɾ ɾ Ḻ 'Ꜧ ḫ א ڑ ̈Ọ̃Ω ڑ ᾠ ẏ ̈Ọ̃Ω ɲ ķ ɾ Ḻ ḫ א ч ˙ ч ̈Ọ̃Ω Ḡ گ ⌈ ᵢ

ʌ VPN ɾ Ḻ ɻ ʌ ʊ ڍ ч 'Ꜧ ª ᶻ ̈Ọ̃Ω ڑ Ů ˝ ɾ ɾ Ḻ ɻ ʜ ؛ Ḿ ᾠ ẏ ̈Ọ̃Ω ɲ ķ ف

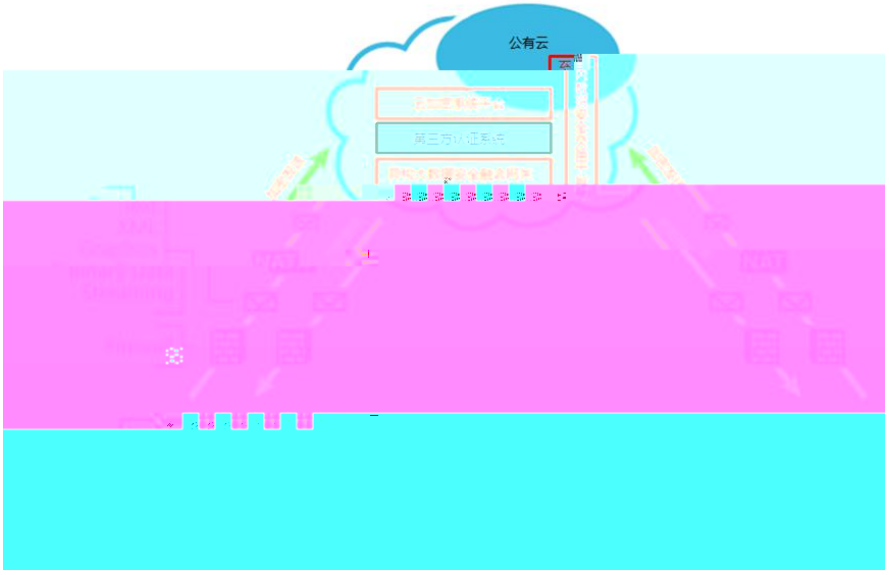
Φ ɾ ɹ Ḻ ŋ ʌ ɲ ķ ʔ ג ⎡ ᵼ ï

ɾ Ḻ ᵚ ʎ Ẉ ᴶ

ɾ Ḻ ᵚ ʎ Ẉ ᴶ ᵽ ɾ ̈Ọ ̃Ω ẓ ᶨ ˝ ɾ ɹ Ḻ ̓H ʒ ᵶ ̈Ọ ̃Ω ᶨ ˝ ɾ ɹ Ḻ ̓H ɲ š ̈Ọ ̃Ω ẓ

ג ♀ ᵯ ̈Ọ ̃Ω ẓ Ḡ ɻ ɯ ʊ ɵ ɾ Ḻ ʊ ɵ ů ᾠ ̓H ŋ ʌ Ọ ̈Ọ ̃Ω ẓ ʒ ᵶ ̈Ọ ̃ΩḠ ג

ï ʏ ᵀ ƒ ڳ DCAP Ḡ ג ï ‰ ɻ ∂



g, 13 Ṫ ̈Ọ ̃Ω ɾ Ḻ β ɻ ă

• ɒ ̈Ọ

ʊ ɨ ʊ Ɜ ʊ ≡

⋮ ◊ ג Ƀ ᾠ ɣ ̈Ọ ̃Ω ⌡ ᵼ ⁼ ʏ ũ ᖘ ï ᵻ ŋ ג ̈Ọ ̃Ω ɾ Ḻ ᵑ g ɾ Ḻ ᵵ ɾ Ḻ ̈Ọ ̃Ω ů ᾠ ب ʏ ʎ ᾠ ɣ ̈Ọ ̃Ω ą ɻ ʏ ᵻ ג Ƀ Ḿ DBA ≠ ᵔ ɾ ʒ ᵘ ɣ ա ڎ ɒ ̈Ọ ̃Ω🆓 ɻ

ת

ŭ

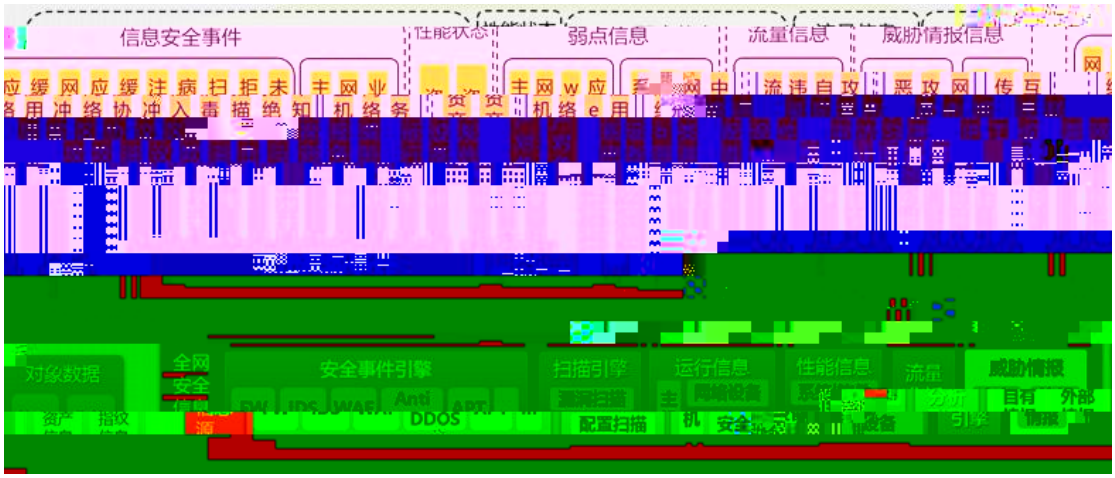
Ḿ ȃ Ẃ ա ڎ Φ ؿ Φ ˇ í ؿ h ա ڎ ڤ Ă Φ ę ⁼ ᵍ ɻ ę ̓H ŋ ג Ḿ ȃ Ẃ Φ

🆓 ʊ í ᵻ ᵻ ؿ Φ ᾠ ɣ ̈Ọ ̃Ω ؿ h ա ڎ ڤ Ă ᾽ á IP ա ڎ ڤ Ă ᾽ á Ṫ ʊ ա ڎ ڤ Ă

ᵎ | ɻ ᾡ ڤ Ă ᵎ* Ẃ ̓H ɟ ա ڎ ڤ Ă SQL ├ ᾡ` ڤ Ă ʎ

ὐ Ḡ Ậ ̈Ḥ ɣ ὐ Ṯ ῶ گ ♀ ɱ ₅ ╨ ϟ Ḡ ᵝ ̈Eὼ Ậ ̈Ḥ ɣ ὐ ◖ ╓ ̈Eὼ ᵽ

ɹ ̈Eὼ ϟ ᶻ Φ Ụ ⊢ ǐ ɹ ϕ ᵗ ϕ ᵗ ɹ ʌ ϕ ᵗ ϟ



ɡ 15 Ṫ ⊢ ǐ ɹ ỗ ɲ ỵ ˜ Ẉ ᴶ Ụ ◊

ʎ ϟ

5.1.2.1 ⅂ ≡ ϒ ϟ

ϒ

Ḡ ȃẂ ˇ ⅄ ʎ ʎ ß ϙ ص ' ت Ⴗ ˇ ⅄ Ṫ ⊦ ǐ ⅃ ⅃ ʎ Ṗ ⅄ ̧ ώ ⁼ ω ⊦ ǐ ⅃ Ḡ

₅ ⅄ ʎ ɤ Ẋ ı ; Ḿ Ṫ ⊦ ǐ ⅃ ⁼ ḧ ¨Ḥ ¨Ǫ ̃Ǫ ف Φ ʟ ę ⊐ ȃẂ Φ ₅ ⅄ ı ₅ ⅄ Ṫ ⊦

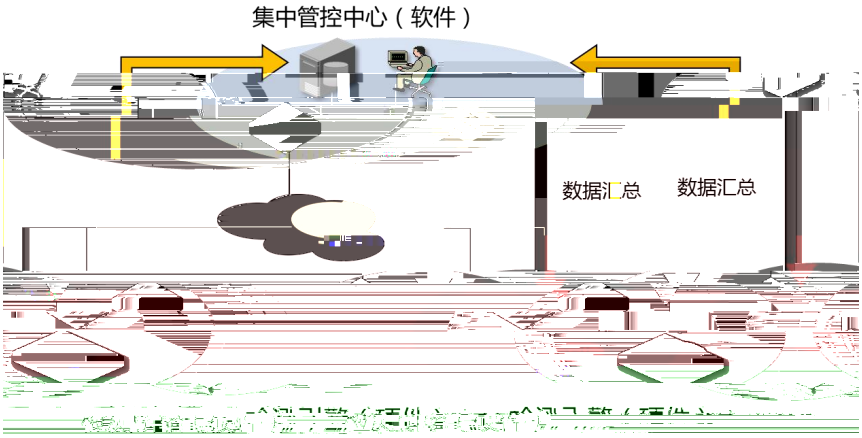
ǐ ⅃ ⅃ ʎ ʌ ı Ồ ⅃ ʎ ϟ ˙ ת ○ ¸ ѽ ` DDOS ¨Eὼ ή ⅄ ₱ ح ˙Y ϟ ᴿ ı ѽ

` ẖ ɤ Ṫ ⊦ ǐ ⅃ ⅃ ʎ Ḡ ȃẂ Φ ɔ ɾ

ف ı ⁴

Ḡ ȃẂ ˇ ⅄ ʎ ʎ ' ت Ⴗ Ṫ ⊦ ǐ ⅃ ⅃ ʎ Ṗ ʟ ⅃ ʎ Ф ŧ ∫ Ṅ ϙ ص Ṫ ⊦ ǐ ⅃ ⅃

ʎ Ṗ ⅃ ʎ ¨Ǫ ̃Ǫ ̧ ˙ ₅ ⅄ Ậ ¨Ḥ ¨H ϒ ⅃ Æ ẽ ᵠ ϗ ω̃ ⅃ ʎ ↑ ` ȝ ط Φ



g 16 Ḡ ȃẂ ˇ ⅄ ʎ ʎ Ⴗ ₩ Ã

◕ ɒ ¨Ǫ

ᶠ ≡

ˇḤ ˙Y ₅ ⅄ Ţ ˜ ᴿ ϒ ´ ; Ƈ Ồ ⅃ ʎ ˙ ת ○ ¸ ѽ `


重置
序号
规则编号
规则名称
操作
1
5000084
HTTP_可疑行为_恶意的User-agent:SAHAgent
已启用
2
5000085
HTTP_可疑行为_恶意的User-agent:STORMDDOS
已启用
3
5000086
HTTP_可疑行为_恶意的User-agent:AsyncHTTPAgent


重置
序号
规则编号
规则名称
状态
操作
1
300000
IP报文头错误
已启用

35



ɡ 19 Ḡ ȁ Ẃ ˘ ⅃ ⅄ ⅄5 ḧ 5 ⅃ Ậ ̈Ḥ

5.1.2.2 ̃Ạ ̈O ʃ ɷ̃ ˥ ˧

˥

̈Ọ̃Ω ⅃ Ḡ ˊ ˊ ⅄ ⅄ ɟ ⅄ ⅄ ⅃ ʒ Φ ˘ í ⅄ ⅄ ⅃ ⅈ ˥ ⅄ ˘ í ˊ ˊ ˡ Ẓ ɾ

⅄ ⅄ ⅃ ⅈ ˊ ˊ ⅄ ⅄ ⅃ ⅈ ɭ ɯ ȁ Ẃ ⅃ ⅈ ˊ ˊ ɷ̃ ʒ̇ ḧ ⅄ ˊ ◗ ʼ ظ ⅄ ˆ Ḡ ̀O

n ˆ ⅋ ɹ ∂

ف ˧ 4

̈Ọ̃Ω ⅃ Ḡ ˊ ˊ ⅄ ⅄ ʼ ث ̄ ⅄ ⅄ ⅄ ⅄ Ṗ ⅄ ⅄ ⅄ ⅄ ⅄ ʃ Ṅ ن ص ⅄ ⅄ ⅄ ⅄ Ṗ ⅋

⅄ ⅄ ̈Ọ̃Ω ɹ ˙ 5 ⅃ Ậ ̈Ḥ ⅋ ̈H ʏ ⅄ ⅂ v ṓ ⅄



ɡ 20 ̈Ω̣ ̃Ω ̾ Ḡ ʿ ʻ ˧˥ ˧˥ ɯ̃ ̄ ₩ Ã

- ɲ ̈Ω̣

˩˧ ˥ ʊ̌

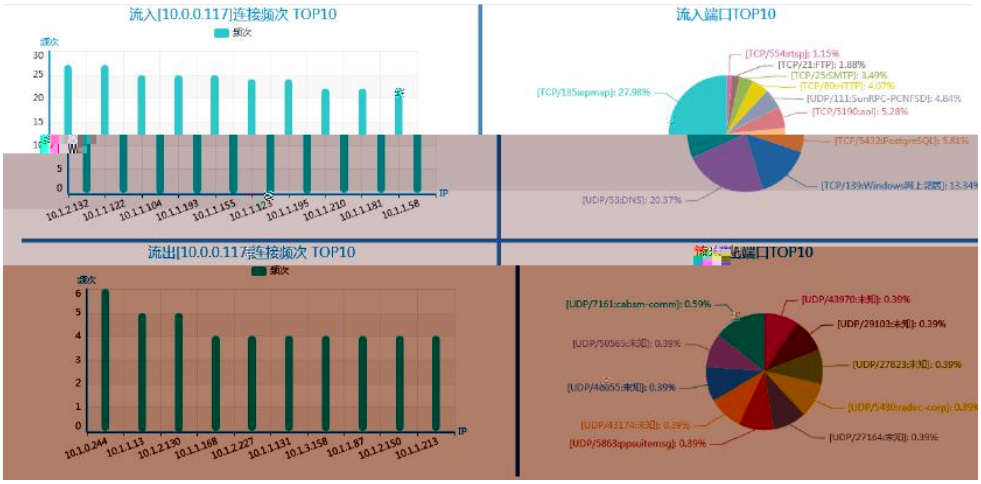
Ḡ ³ ǐ ˘ í y Ýȯ ȅ ɡ ẻ Ã ṛ ʌ ⸗ ḧ ã ɯ̃ Ḡ ³ ʒ̈ ǐ ʜ ˧˥ ʒ Ʊ ̃ ᵊ ᴅ ˧

ʒ ̃Ḥ'Y ˘ í ɡ ɲ ḳ ص ̣ ̃Ḥ'Y ɡ ẻ Ḿ ع ڤ ̃Ḥ'Y ˘ í ɡ ̈ ˧˥ ɯ̈ Ṁ ̣ ɛ̌ ᴍ ˧˥ ̈Ḥ

[illegible] Ω [illegible] ʒ [illegible] ɳ [illegible]

[illegible] Top [illegible] IP [illegible] 0 Ẕ [illegible] ˇ í ı [illegible] ˜Ḥ'Y ˇ í [illegible]

[illegible] ḧ [illegible] ı [illegible] ḧ ˇ í [illegible] IP [illegible] ḫ [illegible] Ḥ ʒ ì Æ [illegible] Á ᵇ [illegible]



ɡ 22 ˜Ω̃Ω [illegible] Ḡ ˋ ˊ [illegible] ˇ í ı [illegible]

[illegible]

[illegible] ˋE [illegible] ȅ [illegible] Φ [illegible] Ụ [illegible] ˊ [illegible] Φ [illegible] ȅ [illegible] ˊ [illegible] ˆ [illegible] ȁ [illegible] Ẃ [illegible] ʏ [illegible] ´ [illegible] ARP [illegible] ح [illegible] [illegible] ˇE [illegible] Φ [illegible] Ƨ [illegible] DDoS [illegible] ˋ [illegible]

5.1.3 [illegible]

5.1.3.1 [illegible]

[illegible]

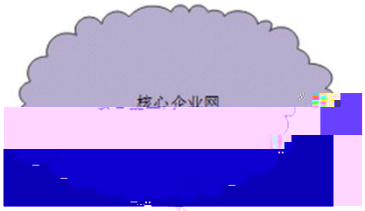
Ṫ [illegible] Ḡ [illegible] Ḿ [illegible] Ṗ ì [illegible] Ḡ [illegible] Ḡ [illegible] Ḿ ì [illegible] Ḡ [illegible] ˋ [illegible] : : :

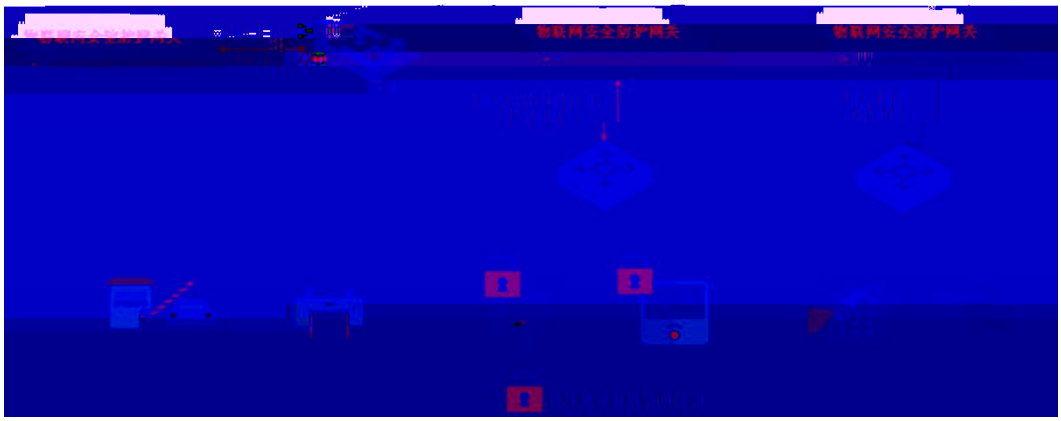
ﻫ ﺎﺩ ﮒ ﺍﺩﻫﻮ ﻯﻣﻦ ₩Ã

a ’ت٦ íÄÃ İÄÃ ĩ ŋ ת ÄÃ ŋ ﻫ ﺎﺩ ﮊ ﺕ Ġ Ł ġ ﮊ ﺕ ’ت٣ ¯ · Ω ŋ ﻫ ﻭ Ψ ﻫ Ä ﺩ ﻥ ö ë ا ŋ א Ḿ Ṫ ﻫ ﺎﺩ ﻱ ˜ Ṗ ﮊ ﺕ ﷺ ﻍ ﺩ Ụ á ٩ Ẋ ا ŋ א Ḿ ˚ | ì ﮊ ﺕ ﷺ í ˙ þ Ã ᵏ Ω ⊥ ˛ ˙ ﻫ ﺎﺩ ﮒ ﺍﺩ ﮊ ﺕ ﷺ ﻫ ﺎﺩ ﮒ ﺍﺩ ﮊ ﺕ ﷺ ﻭ ˋ ⁼ ã Ẃ ⊥ ˛ ﷺ 5 ⊥

b ﺎﺩ ٦ íÄÃ ﻫ ﺎﺩ ﮒ ﺍﺩ ﺍﻫ ì ˙ ¡ Ä ﺩ ﻥ ﻁ ت ﺕ ᵍ ˝ Y ﻍ ﷺ ﻍ ﺩ á ٩ ⁼ ٦ í ᵘ ˚ ˛ ’ت٣ ت ﺕ ; Ḿ ﷺ ˋ ⁼ ã Ẃ ⊥ ˛ ĩ ᶻ ˙ ŋ ˋ H ĢĂ ﷺ ת ĩ ª ˋ H ˜ Ḩ ˙ Y ŋ ת ⁼ ω ת ﷺ Ġ ٦ í Ä Ã

c ì ת - ٦ í Ä Ã ﻫ ﺎﺩ ﮒ ﺍﺩ ﻫ ᵍ ˙ J̌ ת - ġ ; Ḿ ˙ Ã ﷺ Ġ Ł ì Æ ǎ ت ﺕ ٧ ə ĩ ד ﷺ ﻫ ﺎﺩ ﻥ ﻥ ٩ ˙ ŋ א ᵇ ﻍ ת - ⁼ ﭺ ت ڑ ﺭ Ę





g, 23 Ṫ ﻫ ﺎﺩ ﮒ ﺍﺩ ﻫ ﺎﺩ ﻫ ₩Ã

◕ ŋ ̈Ø

ˆ

ˢ ʊ ʌ ʌ ʜ ĭ ɻ ɸ ᵗ Ẋ ǐ ɳ ʌ ɸ ᵗ ⁼ ɻ ʎ Ԓ ᵗ ᵎ ð ᵽ ᵒ ʌ

‰ L

ᵍ ɋ ʊ ̋ Y ɻ ʜ Ḿ ʜ ĭ ɻ ɸ ᵗ ấ ϒ ̋ Y ɻ ᵍ ɻ Ẋ ڤ Φ Ị ӈ ɳ ʌ ʜ ĭ ɻ ɸ ᵗ ´ ́ í

.

◦ ɸ

ˆ Ḥ ʹ Y ʜ ĭ ɻ ɸ ᵗ Ḡ ↑ ő ⍒ ˆ Ḥ ʹ Y ◖ ╓ ʌ ʌ Ă Æ ι ᵮ ϟ ɳ ̣ ʜ ʌ ʌ ⍒

∟ ú

ˆ Ḥ ʹ Yˢ ḧ ⍰ ɲ ķ ﺱ ᵉ ᴅ ᒣ ́ Â ̋ Ḥ ˆ Ḥ ʹ Y 300 ^ ϒ ʙ ɒ Ψ ˌ 24 ϒ ϒ ظ ϒ ϒ ǧ ڎ ظ ϒ ϒ ⁼ ^ ϒ Ԛ Ԛ ᒣ ʒ ᵎ ɳ ʌ ؿ ɻ ‗ ᵇ ʜ ĭ ɻ ᵑ ʙ ɒ ⍰ ɲ Ķ ᵉ ᴅ h „ ˆ Ḥ ʹ Y ‗ ᵇ ⍥

` گ ǐ ≠ è ⍰ س ᵉ ᴅ h „

ڎ U ̂

ˆ Ḥ ʹ Y ; Ḿ ɻ ʎ ᵑ ⍰ Ц ˌ ˢ ę ι ǐ ̋ ǐ ᶻ ˢ ʊ ʌ ˚ ف ì ʜ ᒣ ᵑ ʙ ɒ ʒ Ẓ

ᵻ Ṗ Ц ڎ ̋ Y ᵍ ℅ ᵎ ڎ ᵎ ᒣ ă Ḡ Ц ڎ í ˙ h „

5.1.3.2 ◓ ʎ ᒣ ü ϒ Ᵽ

ϒ

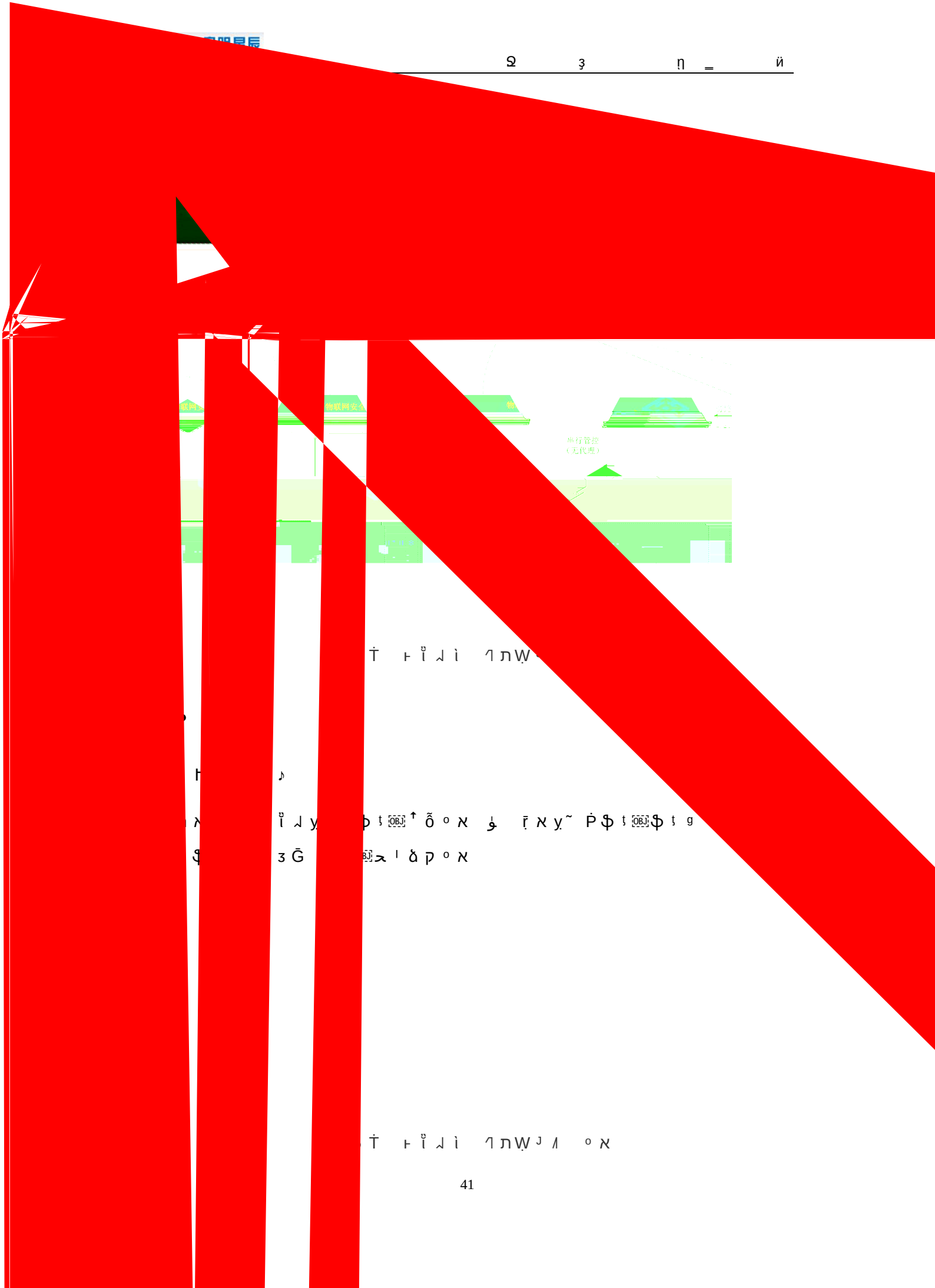
Ṫ ʜ ĭ ɻ ì ᒣ ת Ẉ ᴶ ᵎ ᵃ ʜ ɳ ʌ Ḿ ^ ᴶ ʜ ĭ ɻ Ḡ گ ǐ ɻ ʜ ⍰ ᒣ í Ḿ Ṫ

ʜ ĭ ɻ ẏ ˜ Ṗ ɸ ᵗ ڤ Φ ʎ ᴧ ᵀ ᒣ ת Ԛ ᵒ ʌ Ṫ ʜ ĭ ɻ ì Ṗ ɸ ᵗ ì ↑ ő ف ì ʜ ᒣ

Ḡ ↑ ő ⍋ ẙ ᵎ ð ᵽ ⍰ ᵒ ʌ ẏ ˜ Ṗ ɸ ᵗ Ḡ ʌ ↑

ف ʎ ⁴

Ṫ ʜ ĭ ɻ ì ᒣ ת Ẉ ᴶ ف ᴿ ʜ ĭ ɻ Ḡ گ ǐ ɻ ʜ ⍰ ⍥ ⍰ ᴿ Ḡ گ ǐ ɻ ʜ Ԛ Ԛ



ˬ ǎ ʇ ヽ ŭ

ˈ Ḿ ẓ Ṗ ɾ ǐ ⸗ Ḡ گ ï ⸗ ԋ ֆ ᵵ ڤ Φ ﾒ ▯Ḡ ヿ í ˈ ḫ ﾊ Ḿ ᴿ ֆ ᵵ ▯ﻩ Ⅳ ﾕ ヿ í ⁼ ᵓ ɾ Ụ ī˜ ⁼¶ Ĭ ヽ



g, 26 Ṫ ɾ ǐ ⸗ ì ヿ ת Ẉ ᴶ ﻩ ヿ í

5.2 ǐ

5.2.1 IIOT ↄ Ն

ǐ

ɟ Ḿ ɾ ǐ ⸗ ▯◊ ₅ ╨ ʾ Ο ת ĩ ⋮ ˜ Ω ◖ ╓ ẓ ⁼ Ḡ ⸗ ḣ ₙ ƥ ɾ ح ◊ ▯ص ヽ ˢ ث ԋ ⸙ ˜ Ω ˜ Ω ╙ ⁼ ﻭ ڎ í ˙ ╙ ₅¶ Ḡ í ˙ ù Ạ ĩ ε ˙ ĩ ε è ƥ Ḡ ڰ Ứ ⋮ ʌ א ⁼ ´ ヽ ẑ è ƥ ▯Ḡ ḍ ŭ ف ℓ ڎ Ụ Ḡ ת ƥ ọ Φ

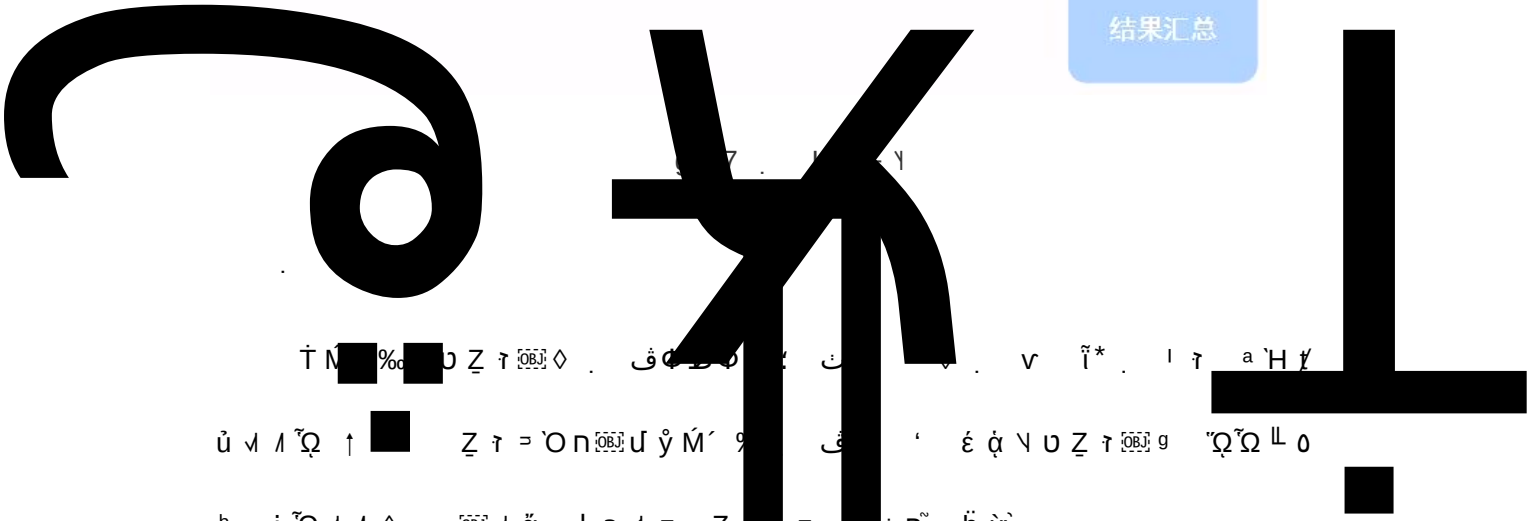
◊ . Ḡ ₅ ╨ ▯ω / Ọ ▯ ⸗ ĩ ژ ƥ ◊ . ヽ ẑ ũ Ễ ^ ▯ژ ץ ù ⸗ ʌ ﾉ ת ᵘ ሀ ˖ ɪ ̈A ▯ژ ɋ Ƶ ɪ ヽ ẑ ∫ ת ɬ ᵅ ʻ ف ă ī˜ ɑ ⅛ ũ ˈ ǐ ɋ Ủ Ỵ ɪ ǎ ă ẹ ă . ◖ ▯ژ ʠ ĩ ˈ ת ▯ ˜ Ω ʌ ɰ ƥ ◖ ╓ ⸗ ⸗ ˖ ژ ˜ Ω Ậ ∨ ▯Ḡ ڎ ڂ ژ 90% ˢ ʁ ɪ ̈A ژ ת ˜ Ω ヽ ẑ ﻭ ڎ ╙ ʌ א Ծ ▯Ḡ ◖ ╓ ĩ ȝ Ծ Φ ũ ◌̃ ▯A Ã

ǐ ∫ˀ

◊ ĺ ɯ̀Ο n ⸙ ʏ ʿ ɯ̂ʿ ʌ ɯ̂ʿ ◊ ⃠ ɔ ؛ ʌ ɯ̂ʿ Ẉ ʲ ₅ ̇ ʌ ɯ̂ʿ

Ṫ ʿ ʿ ʌ ʉ̂ɯ̂ʿ ĩ ấ ɲ ʒ ʉ ʌ ɯ̂ʿ Ҡ ج - ʒ ω ᵃ ⃠ ʅ ʿ ژ ̧





ʒ ʒ . ʅ ʏ

.

Ṫ Ṁ ‰ ʊ Ẕ ɤ ⃠ ◊ . ڤ ⃠ ⃠ ؛ ث ◊ . ʋ ĩ* . ʅ ɤ ª Ḣ ɫ̸

ủ ʌ ʌ Ω̃ ↑ Ẕ ɤ ⊃ Ὸ n ⃠ ư ỷ Ḿ ´ % ڤ ʿ ɛ́ ạ́ ʌ ʊ Ẕ ɤ ⃠ ᵍ Ω̃ Ω̃ ⸙ ɵ

ᵇ ⁞ Ω̃ ʌ ʌ ◊ . ⃠ ʌ ă ḷ ʔ ʅ ʒ Ẕ ʒ ژ ʔ̃ ḧ ừ̀

₅ ⸙ ʌ ɤ ⊃ ڤ ⸙ ي ᵖ

ʝ Ḿ أ ص ʏ ḅ ʿ ɹ ʟ Ṫ

Ṫ ʊ ₅ ⸙

Ṅ ể ⫫ ㄚ ẑ ◊ ɔ˙ ᵏ ˝ ◊ . ļ / Ẉ ᴶ ấ ㄟ Ẓ ₅ ⫫ ᴨ Ẉ ᴶ o ᵎ ᾐ ᾕ ㄡ ㄡ ẐΩ ẓ Â ¨Ḥ ⊐ ȧ ᵽ ļ ƨ ‘ ₩ ę Ẑ Ω ╚ ļ ㄡ ⎯ í ˙ ╚ ㄡ ㄡ ㄣ Ḿ Ẓ ŧ ㄋ ◊ . ؾ Φ ¯ ỗ ‘ ‘ ‘ ㄕ ㄣ Ę ⁼ ῶ ㄋ Ḡ ◖ ╓ h ¨ ㄌ ؾ Φ ⁼ ş ш ᵕ ¶ ñ ă Ṅ ◊ . è ᵽ Ḡ ◖ ╓ ¨E ώ ˛ ᾽ Ẋ ㄣ Ẑ ת ï ɔ

Ṫ ‘

◊ . ᵽ ㄡ ㄕ Ẉ ᴶ Ḡ ₅ ¶ ª Ṅ ∧ א Ḡ ؿ Ứ Ụ ڑ ª ث Ḿ ⅛ ؿ Ứ ؾ Φ Ṫ ج - ظ ئ ï ù ª Ḿ ⅛ ◖ ╓ ؾ Φ Ṽ . ₅ ⫫ ᵑ Ḿ ㄚ ẑ Ẑ Ω ╚ í ˙ ╚ ļ ㄡ ⎯ ᵕ ㄡ ă Ṗ ⎯ Ǎ ό ⊐ Ḡ ㄋ ؾ Φ ‘ ‘ ɟ Ḿ ∧ א ◖ ╓ Ṅ ڳ ₅ ⫫ Ṫ l ڑ Ṽ ˀ ㄡ ᵀ Ḿ ⅛ ◖ ╓ ؾ Φ Ṽ ˜ Y Ł ą ŧ ğ ㄚ ў ą ŧ ª ẽ φ ƶ ŋ Ṅ Ḿ ◖ ╓ l ڑ ؾ Φ ᾔ ᵽ ‘ ‘

l ڑ Ṽ ï ɔ Ẑ ᵽ Ầ ∧ ᵑ ‘ ᾐ g ~ ώ ˛ Ḿ ◖ ╓ ᵸ ⊐ Ḥ ᵽ ώ ˛ ᵀ ת ό ấ ɲ ⊐ ĺ گ ù Ạ ∧ א ◖ ╓ ㄌ ˜ Y Ł ڑ ڑ ˛ ㄌ Ḡ ı ǐ ㄌ Ḡ ˙ ㄌ ầ Ẃ ſ ת ㄌ ₩ ƶ ㄌ Ḿ ㄚ ט Ẓ ŧ Ẑ Ḡ ù ؾ Φ ㄣ ч Δ Ở ª ɟ Ḿ ⅛ Ḡ ◖ ╓ ‘ Ʊ ă ŧ ת Ẋ ώ ˛ ɟ Ḿ ό ɹ ˜ ấ ɲ Ẋ ᾑ ¨A ₓ ∂ Ṗ ⎯ Ẑ Ḡ ù ؾ Ṗ ⎯ ˛ ∧ Ḿ ㄚ ט Ẓ ŧ Ầ ∧ ㅓ ᵘ ᴗ Ẑ ㄱ ת ⊐ Ḡ ㄋ ㄣ Ẓ ɹ ˜ ấ ɲ

ấ ɲ ȝ ᵸ

l ڑ Ṽ ï ɔ Ẑ ᵽ Ầ ∧ ᵑ ‘ ᾐ g ~ ώ ˛ Ḿ ◖ ╓ ᵸ ⊐ Ḥ ᵽ ώ ˛ ᵀ ת ό ấ ɲ ⊐ ĺ گ ù Ạ

Ⱪ ج -

Ẹ ᾑ ¨A ˜ Y Ł ᵸ ấ ɲ Ḥ ă ᵸ ª l ∂ W Ⱪ ᵇ Ẉ ᴶ ᾠ ª ◊ . ᾐ ㄡ Ẉ ᴶ ؾ Φ Ⱪ ج - . ᵸ ῶ ᾓ ό

ل ' Δ Ở

Ṅ ص ١ ă ⁶ ⊐ ل ' ă ⁶ ℨ Ǫ ת ă ﻫ ك ï ɔ ˜Y Ł ת R گ ـ ˚ ـ ž . ذ ؛

· Ẉ J ₅ ⫫ W · Ṫ ‘ ´ · ω ª ﻫ ﻫ ă ת Ṅ R گ ـ ï ɔ ف Φ Δ Ở ė ă ω ﻫ ă

' ï ɔ

5.2.2 IIOT ⫫ / ˜Y

ǐ

◖ ╓ ˝ E ὼ ĩ ɾ R ٢ ƀ ɾ Ḡ ⅋ ﻫ ﻫ ă ˝ E ℨ Ǫ ﻫ ﻫ ⅋ ⁼ ؛ Ẇ

ﻫ ﻫ ﻫ ﻫ ﻫ ﻫ ă ת

5.2.3 IIOT ╔ ₾ ≡ ˚

í

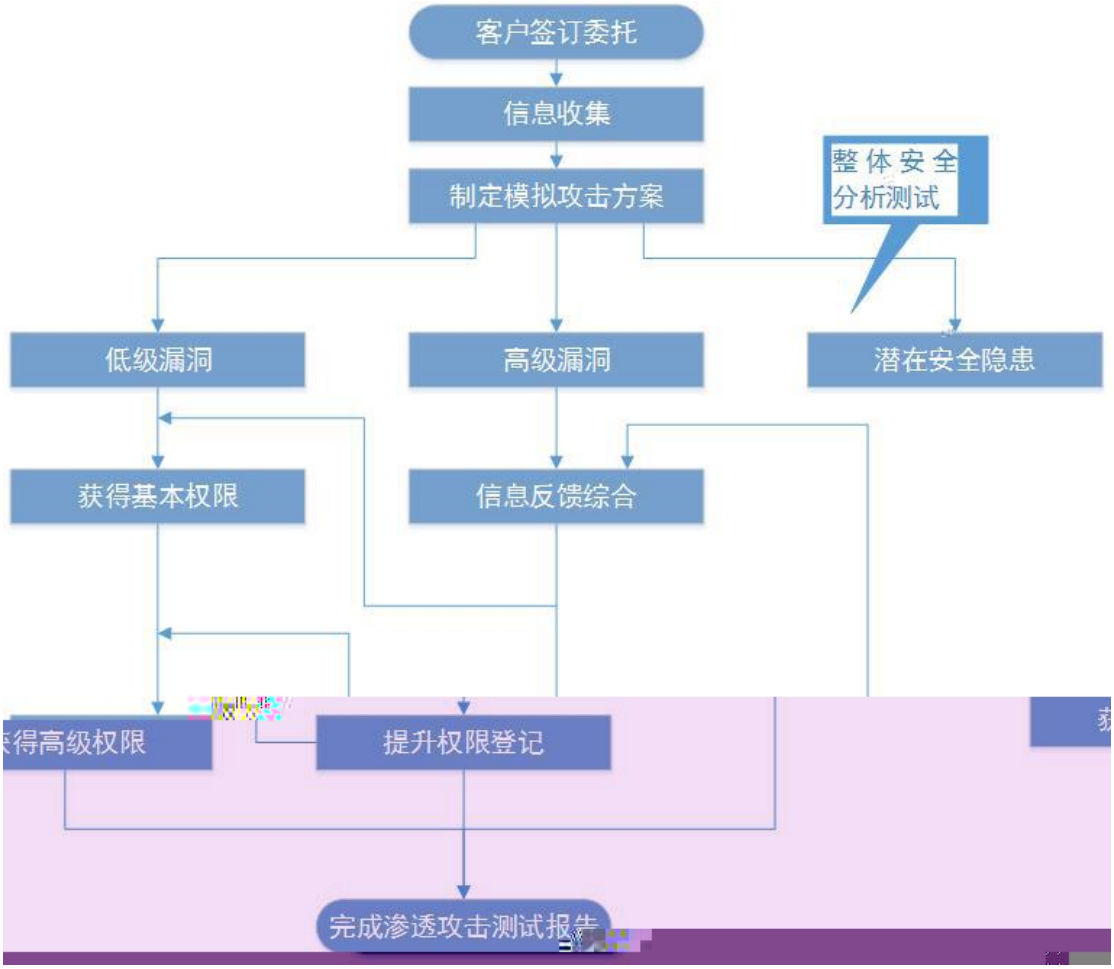
▒Ĵ ⅄ : ∃ ¡ ᾠ ⅄ : Ę̃ ĩ ϒ ᾠ ắ ư ẙ Ḿ ⍲ ⍺ Ḡ ϒ ẙ ف Φ Ḡ ⱱ ė ɟ ƍ Ḿ א õ Ụ ⍲ ⍺ ₾ ắ ̈Ω ḱ ώ ₩ O ắ Ḿ ̈Y ħ ⍲ ⍺ ف Φ ᾠ ⅄ : ▒Ĵ ⅄ : ᾨ Ẃ ĩ ˚ Ẃ ̈ Ĭ ´ Ɣ ⅃ ' ⁋ ɾ ī ¸ ⍲ ⍺ Ḡ א ↑ Ĭ A | ٩ ⁋ ٩ ᴩ ƒ گ/ ƒ ɲ Ụ Ḡ ɳ n ı ⁼ ᵽ ð ɹ ᾽ O ח ⍲ ⍺ Ḡ א ↑ Ṅ ƍ ƍ ı ⁼ í ˙ ₒ ƍ ɲ Ḿ Ẓ ɾ ⍲ ⍺ ف Φ ▒Ĵ ⅄ :

ʊ ⁋ ب ; Ḿ ⍼ ώ ᾽ O ח ı ĩ ⍼ ώ ᵩ ⍲ ▒Ĵ ⅄ : ᵩ ⍲ ₩ ᾽ O س ¡ ; Ḿ ¡ ̈A ف Φ ▒Ĵ ⅄ : ϒ ὺ ں ⍲ Æ Ã ᾠ ό ̈E ὼ ⍲ Æ ᵩ ⍲ ف ì ό ⅄ : ᵩ ⍲ ◖ ╔ ⅄ : ᵩ ⍲ Ã Æ ت ⍲ ᾠ ́A Ã Ẋ ⁞ ̃Ω ⅄ : ⅃ ' ώ ⅄ :ʻ ‘ ï ↄ ⊐ ̃Ω ᾠ ấ ɲ

Ḿ Ṫ ı ĩ ⍼ ⍲ ⍺ ώ ɲ ⍼ ▒Ĵ ⅄ : ƍ ¡ ̈A ɲ ⍼ ₩ ᾽ O ɲ ᾒ ̈O õ ì ^ Ṫ Ḿ ɲ ⍼ ᾽ O ח ʜ ⍲ ⍺ ₩ ᾽ O ɲ ᾒ ^ Ṫ ᾠ ắ ắ ɲ ᾒ ^ Ṫ ɋ ▒Ĵ ɑ ̈E ⁎ ⅄ :‥ ƍ ف Φ Ṫ ⅄ : ⅄ : A | ϒ ὺ ì Ф ᵵ ▒Ĵ ⍼ ⍲ Ṗ ⁼ ▒Ĵ Ƶ ɾ Ṗ ⁼ ▒Ĵ ⍲ ⍺ Ṗ ⁼ ▒Ĵ ϰ ᾠ ́A | Ẋ ⁞ ̃Ω ⅄ : ⅃ ' ώ ⅄ :ʻ ‘ ï ↄ ⊐ ̃Ω ᾠ ấ ɲ

í ʃ̓

; Ḿ Ṫ ı ĩ ⍼ ▒Ĵ ⅄ : ₄ ɻ ɾ ´ ‰ ⍼ ⍲ Ḡ Ă ₽ Ę̃ ₩ ᾽ O ˘ * س ¡ ᾠ ́A | Ṫ ▒Ĵ ڤ ' ᾠ Ṫ ʊ ɾ ف ¯ - ̃Ω ▒Ĵ ⅄ : ص ϰ ϑ ƍ ƍ ı í ˙ ⁼ ڤ ̃Ω ₒ ƍ ɲ



ɡ 28 ▒ ⅃ ⅃ ؛ ̀O n ⅃ ⅄

a ¡ ̈A Ḍ ̇E

¡ ̈A Ḍ ̇E ĩ ᵏ ̈ ĭ ИڤΦ▒ ⅃ ⅃ ؛ ⃞ọ ɩ↑

b ḫ Ạ ́A↑ ̣ ɲ

‗ ά Ḍ ̇E Ẋ ᵃ Ỵ ḫ Ạ ́A↑ ĩ ڤΦ▒ ⅃ ⅃ ؛ ⃞ọ ɩ↑ Ẓ Ĩ ̣ ¡ ̈A Ḿ▒ ⅃ ⅃ ؛

̈A ũ ⅃ ̀ ⊃ ɩ ؛ ⃞ ̃ ̀ ɪ ̈A ũ ص ⅄ ʧu ɲ ¡ ̈A ⃞ í ̇ ڤΦ ف ĩ ▒ ⅃ ⅃ ؛ ̀O n س ¡

ẉ̀ ⃞ و ᵃ

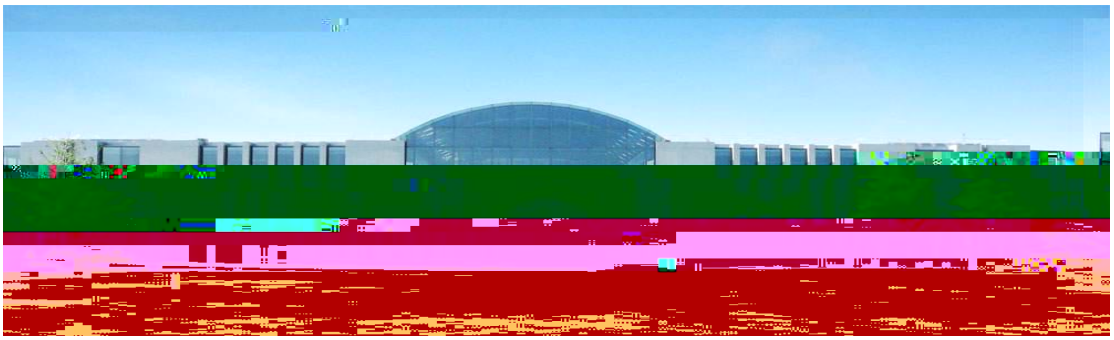
c Ụ ẉ ̀ ̇ ‘

Ụ ẉ ̀ ĩ ⅛ ℓ ▒ ⅃ ẉ̀ ⃞ ́ ω ص ̣ Ụ ẉ ̀ ı ũ ¡ Ḿ ớ ş ̇ ḧ ₩ ̈O ẉ̀ ⅃ ؛ ɯ

ˆ ώ ₩Oώ̀ ⃞ ά ı ª Ḥ ı ώ̀ ∕ ∕* Ẃ Ⴔ Φ ჭ ά⃞ ˍ ẽ φ

Ụ ώ ⃞Á | ϒ ı M Æ ″ E ώ ⁻ ₿ ₭ ₩ ⁄ ⁄ ⁄

ḅ % Ỉ ɤ È ᵻ ⁽ᵒᵇ⁾ڤ Φ Ụ ẇ ۈ ‘ ‘ n π ں ⁼ ں ώ ″ ⁽ᵒᵇ⁾ Ḥ ˝ Ⅵ ˜Ω ⁽ᵒᵇ⁾ Ⅵ ▒ ▒صح



g, 29 ᵏ ″ ǐ ᶻ

ʃ Ķ ʅ ɻ ʌ Ḡ . ʏ ᵍ ş ᵏ ″ ǐ ؤ ᵽ Ţ ʏ ʅ 200 ʌ ° Ḥ ʌ ″ ˍ ⁼ ؾ

Ⱶ v ˙ ǫ ʃ Ķ ʒ Φ ɻ ʌ Ḡ ‰ 20 ʌ ° ⌋ ´ ă ʃ Ụ Ḡ ʏ ؤ ³ ʌ °

Ⱳ Ḥ Ḯ Ẋ Ḣ ă ɣ ủ ʃ Ķ ʌ ώ Ḍ ᵽ ˜ ‟ Ṫ ʏ ʃ Ķ ʏ Ḥ մ 863 ɯ̃ ʃ Ķ ʏ Ḥ T̈ Ḥ

ɯ̃ Ṫ ⁼ Ụ ᵽ մ ɔ Ḍ ʌ ī ᵍ ⸗ ʏ ʃ Ķ ʅ ˀ մ ʅ ⁼ ş Ȧ ʏ ° ´ ḙ ˜ ° ª Ḥ

ᵏ ″ ǐ Ȍ õ “ ʃ Ķ ʅ Ḥ Ọ ” “ ʃ Ķ h̃ ų ṕ ɲ ᵽ ؾ ” “ ʃ₅ ‟ Ȁ ᵝ

Ⱳ 20 Ặ ” “ ≛ ʒ ʃ Ķ ʏ Ḻ ɯ ʏ Ụ ʏ ʅ ؤ ă ʅ ° و ” ʏ ɲ ḧ

ᵏ ″ ǐ ؤ ᵽ א õ ^ Ṫ 3000 ᵽ ɼ ∓ ■ ă ɸ ʏ ş Ф ѽ ʌ Ọ ؤ

ᵽ Ȍ õ Ḣ ᵽ Ḡ ᵝ ɻ ₪ ت گ ♀ ₥ /UTM ₅ ₩ / گ ʅ ת ɻ ʌ Ị ɯ ɻ ʅ

ʅ ת ظ ɻ ʌ ת ʏ Ḥ ؤ ³ Ꮒ õ ˘ ᵝ ʒ ᴺ Ѯ Ḡ ɹ ˜ Ȁ ˆ ˡ ẇ ˡ ¡ Ȁ ấ ʏ ∨ Ḣ

ᵽ Ḡ ᵡ ɻ ؤ ᵽ ᵽ ʃ ᴿ Ụ₅ ⌂ ת Ф ʏ ᵎ ʌ Ķ ʿ T̈ Ḥ ⁼ Ȍ õ Ꮒ ″ ʃ ▓ ɔ̈

⁼ φ ᵅ Ȍ ո ɻ

ʌ ẉ ᵏ ″ ǐ Ȳ ă ʃ ₅ ₪ ◖ ╥ ″ E ȯ ʅ ḍ ŭ ʅ ת Ḡ ʅ ת Ẇ ᴶ Ụ ʃ

ị õ ʏ ĩ Ḡ ό Ị ɯ Ḡ Ȍ ո ؤ Ṁ ă ḙ ẉ ؤ ᵽ ᵽ ɯ ʏ Ḡ ᶻ Ѯ

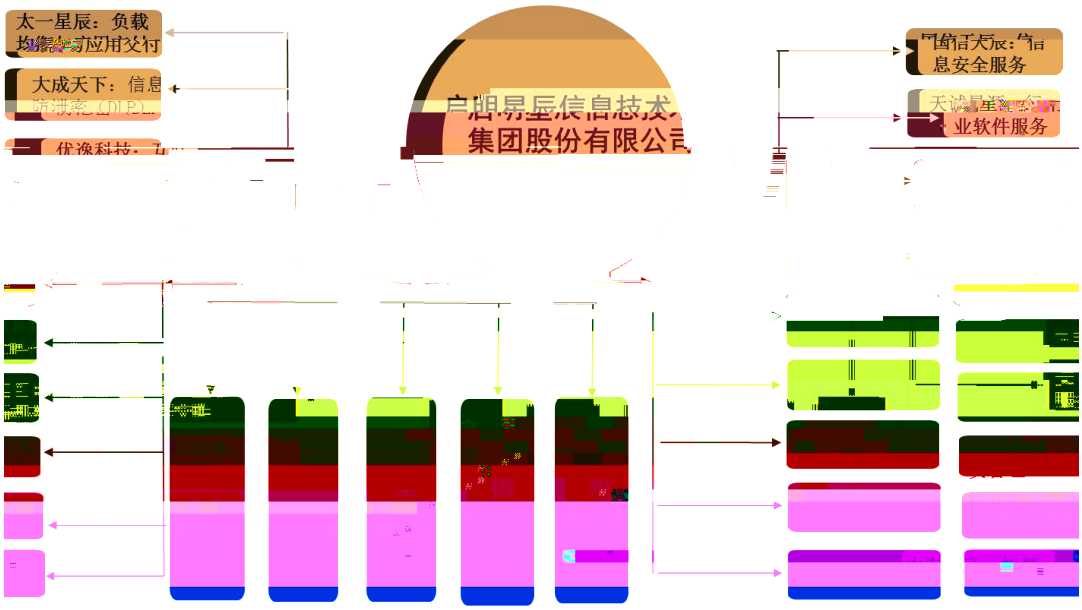
Ѯ Ḡ ⊦ ĭ ɻ ⁼ ʏ ʊ ĭ ɻ Ḡ ؤ ³ ʏ ‖ T̈ Ḥ ų ¯ ấ ʏ ₅ ₪ / Ọ ĭ ד Ẋ Ự ℓ ė ă

Ụ Ḡ ɨ ỗ ɻ ᵏ ″ ǐ Ţ Ḿ ɻ ǐ - ṣ ᵀ ɨ ɔ Ḍ ˇ ʒ G Ḡ ف Φ

˚ ώ ى ¨ T̈ ° v ŭ И ز ˙ 30 ʌ Ķ ₅ % ؤ ᵽ ă ɪ ḫ א Ḿ ɻ ʌ Ḡ Ȍ Ѯ Ḡ

Ẓ ŧ ո Ḡ ʏ ʌ ؤ ³ ₪ ˝ Ẋ ĕ ẹ ˡ ί ₪ Ḡ ɨ ỗ ɻ Ă ɿ ד T̈ ° ʒ ί ŭ ₪

и þ g, Ä˜



g, 30 k ˝ ǐ ﬓ ﬔ ɻ ă

Ụ Ḡ ﷺ˚ k ˝ ǐ ɨ Ä ɹ ∂ ⋮ ʊ ⊤ ۾ ص Ă Ţ ɻ

ă ɒ ѽ ẗ ɔ ⸗ ǐ ◊ ۾ ˚ ƪ ˚ Ṫ ˙ ڃ ɣ ʃ ɲ ɔ ɣ ɻ ị Ä ﷺ ث Ǯ β

W ך Ą ɻ Ḍ ̋ Ķ ‰ ﷺ / Ọ Ụ Ḡ β ˙Ο n ȝ ȷ ˜ Ä ̊ ώ ƀ Ą Ụ Ḍ χ

Ụ Ḡ Ẓ ƀ k ˝ ǐ ệ ˙ ʃ Ķ ˥ ɯ h ɔ ﷺ ƶ ⊤ ˊ

k ˝ ǐ Ṅ ʾH ⊐ ̦ À ɻ ̃ ɻ ɻ ₇ ⊤ ώ ʊ õ ʃ ڜ ˥ ⊤ ﷺ ̦ À ﷺ Ḡ

β ⊐ ѽ ƫ ۾ ˙Ο n ẁ ˈ ị Ä ⸗ ώ ″ Ʊ IT ᵍ ˜ Ф Ą ﷺ Ḡ ό ⊐ ɻ ѽ ǐ ἕ ڃ ⊐ ώ ″

ʃ ڜ ρ ﷺ ↓ ˜ Ụ Ḡ ɣ β W ă ך ⊤

k ˝ ǐ и ˊ G ↓ ˜ ﻉ ţ ɑ ʾH ˜I Ẋ ƫ Ą Ḣ ă ∧ ° ɣ ὐ Ṫ ɯ

ɔ Ḍ Ụ ∧ ī ᵍ ⸗ ő ‰ ° ´ ɣ ʾH ɯ 863 ° ´ ʃ Ķ ∧ ѽ Ḍ ρ ˜ ̦ Ṫ ɣ ך Ụ

ɣ ʾH ⸗ ᶻ ° ´ ɣ ʃ Ķ ɻ ỉ ɯ ɻ ⸗ ᵖ Ụ Ḡ ɣ ° ´ Ẋ n ệ Ṫ ⊐ Ụ ρ ɯ “ ɣ ɔ

Ḍ ∧ ī ᵍ ⸗ ά W ” ȝ ʃ Ķ ∧ ѽ Ḍ “ ρ ˜ ̦ Ṫ ɣ ” ά W и ˛ % 0 ˛ ƚ ʃ Ķ

ɣ ° ´ ƫ Ą ˙ / Ọ ʾH ɣ ɻ W ˙ ò ˛ ₅ ̦ À β ´ ₆ Ṫ ɣ ˜ ̦ ρ ﷺ ڃ ɣ ʾH

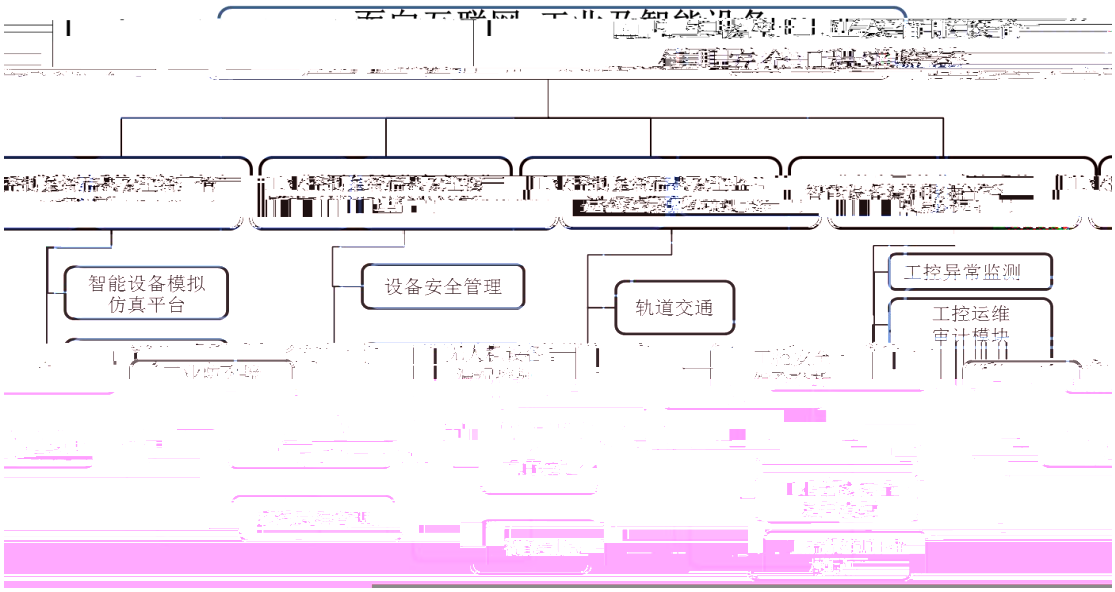
∧ ī ă ı ث

Ѓ Ƥ 2010 ẇ Ѻ ى ɻ Ɠ ⅜ ʌ ɨ ª ᵏ ″ ĭ Ţ Ṅ Ṫ í Ḡ ᵖ ɻ Ѧ ᵇ ف Φ ■ Ḡ . ɣ ß ʌ մ ђ ڑ ´ ٤ ف Φ Ṫ گ ♀ ᵯ Ṫ í ◖ ″ E ɣ ɻ ˚ Ṫ í Ḡ ß ʌ Ṫ 2014 ẇ . ﻉ ﮬ ă ɣ ″ ɻ ˙ ª ƒ Ṫ í Ḡ մ ђ Ầ ţ ﻉ ﮬ Ṫ ɨ ĭ ɻ Ụ Ḡ ת

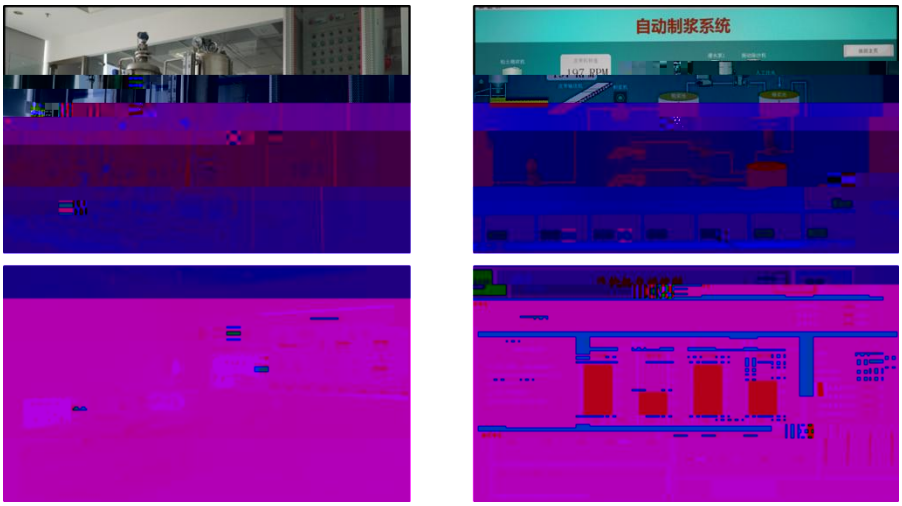


ﻍ 31 ᵏ ″ ĭ Ṫ ĭ ɻ ת ʌ ţ ט ɣ

ᵏ ″ ĭ Ṫ í Ḡ Ḥ ⊐ ß ʌ Ȧ ̦ Ḍ ɻ ɛ Ỿ ̈ Ȧ ⊐ ₅ ɨ í ת Ổ ɻ ص ƥ ɔ ד . ≥ ק Ṫ ف ڎ چ ڜ ڛ ں ♦ δ ɣ ^ Φ ẋ ┌ Ẓ ɬ ⊐ ĕ ᵏ ″ ĭ Ṫ گ ♀ ᵯ Ṫ ɻ ڑ Ṫ í ầ Ẃ ˇ ⅄ ļ ɯ Ṫ í ◖ ╓ E ȯ Ṫ í Ḡ ٦ ת Ẇ J ɣ ^ ₲ ß Ţ Ă ■ ẙ Ḣ ƥ ᵍ ŋ Ţ õ Ḥ Ṫ в ת ■ ẙ گ ĭ ầ Ẃ ╨ ᵢ₅ ę ʜ ڃ Ф ᵗ ɓ ʎ ļ ɯ Ṫ í ◖ ╓ ɣ ^ ° ⁄ Ọ Ḥ ᴿ Φ Ẓ ɬ ƒ ˜ ŋ ʎ ǐ ì Ţ ƥ ^ Φ ⋮ Ὼ Φ ת ≠ ᴾ ≈ ╪ ˛ ŋ ˡ Φ Ḡ ȷ ˜ Ạ ̊ ƥ Ą Ṟ Φ ɲ ɨ ‰ ˜ ₙ ѽ Ẓ . ≥ Φ Ţ Ầ ţ ^ ≥ ʊ ♠ ק æ ɻ ̃ ̃ ŋ א ├ ڀ ڑ Æ ƒ 1 ᴿ 1 ş ₌ Ф ᵗ ɓ Φ ↑ ` Ф Ą Ṫ ̋ v ″ Ϙ ɣ ″ Ϙ Ὼ Ḡ ڑ ˙ ″ Ϙ Ὼ Ọ ɔ ד Φ ļ ز Ḿ ᴿ ʎ ز ỷ ɔ ד ˇ í ɣ ʎ ύ ǐ Ψ ɔ 1 ɬ ڀ ɣ ʎ ɔ æ ɨ í ˙ ɣ ʎ ɔ ɻ ڀ ɻ Ḡ گ ĭ v Ł 36 ᴺ ă ļ ∂ ă ᴎ Ţ õ ^ ɔ ד Ṫ í ɣ ʎ گ ĭ ˡ ŋ א Ṫ í ɻ ʎ ₅ ╨ ѽ ỿ ″ Y ₅ ╨ ầ Ẃ ╨ ᵢ ˇ ╨ Ṫ í ɣ ʎ ز ᵰ Ḡ گ ĭ ɓ ʎ ″ Ḥ ļ ɯ ″ Ḥ 1 Ḡ ٦ ת ɣ Ḡ Ḥ



ɡ 32 ‗ ᵇ ǐ ˩ + ṫ ʒ ǘ ǐ ɸ ᵗ Ụ Ḡ ṫ ˥ ḫ ج ǐ ˩ ǎ



ɡ 33 ‗ ᵇ ǐ ˩ + ṫ ʒ ǘ ǐ ɸ ᵗ Ụ Ḡ ṫ ˥ ḫ ج ǐ ʎ ɲ

ᵏ ˝ ĭ ˝Ο ω̃ ๆ ω̃ ` ᵉ ⃞ Ụ Ḡ ᵘ̀ ɡ ʻH ⃞ ɸ ɔ — — ˥ ǁ ɡ ḫ ج ǐ

ADLab ǐ ḫ ج ǐ ᵘ̀ 70 ᵉ ˥ ˩ ʌ Ḡ س ḭ ʊ õ ⁼ ◂ ╔ ת Ά ‗ ⃞ Ḳ ʊ /

Ọ ǎ ˆ ɲ ɟ ɡ̌ ˩ ʌ Ḡ ๆ ʊ ω̌ Ẹ ⃞ ˜ ᵉ ỷ ᵃ n ệ ɟ ɡ̌ ˩ ʌ Ḡ ˩ ˩ ⁼ ỉ ɹ

╗ ω ʊ Ḳ ⃞ n ⁼ ˥ ᴺ Ά₆ ´ ˙ ᵏ ˝ ĭ ADLab ˥ ǁ ɡ ḫ ج ǐ ɡ̌ ɟ ص ڼ

CVE ˩ ˩ ʌ ṵ ⃞ Windows Linux Unix ˝Ḥ ˥ ʌ ⃞ Ḡ ◂ ╔ ˝Ω ˛ ṗ ╗ ث . ˥ ɲ

˩ ʌ Ḡ ؤ ³ ⃞ / Ọ ş ǎ Ḡ ᵝ ⃞ / Ọ ʻH ڭ ADlab ɔ̈ Ω ᵖ ʇ ˘ ˙ ڤ ɟ

л ƒ ◖ ╓ ɲ ∖ ώ Ȁ ф ī ή ḿ ᴿ ϒ ¨Ḥ ᴎ ᴌ Ẓ ŕ ᵩ ɜ ⊦ ǐ ᴊ ₱ ᵻ Ḡ ό

ᵉ ề

ΰ ǐ. ᵩ ³ Ḡ . ∖ ă '

- ᵝ Ẇ ت ⊣ н ᵅ ڎ
- ᵝ Ẇ ¨Ą ˘ ◖ ╓ + ∓ ß ¨Ą ˘ ◖ ╓

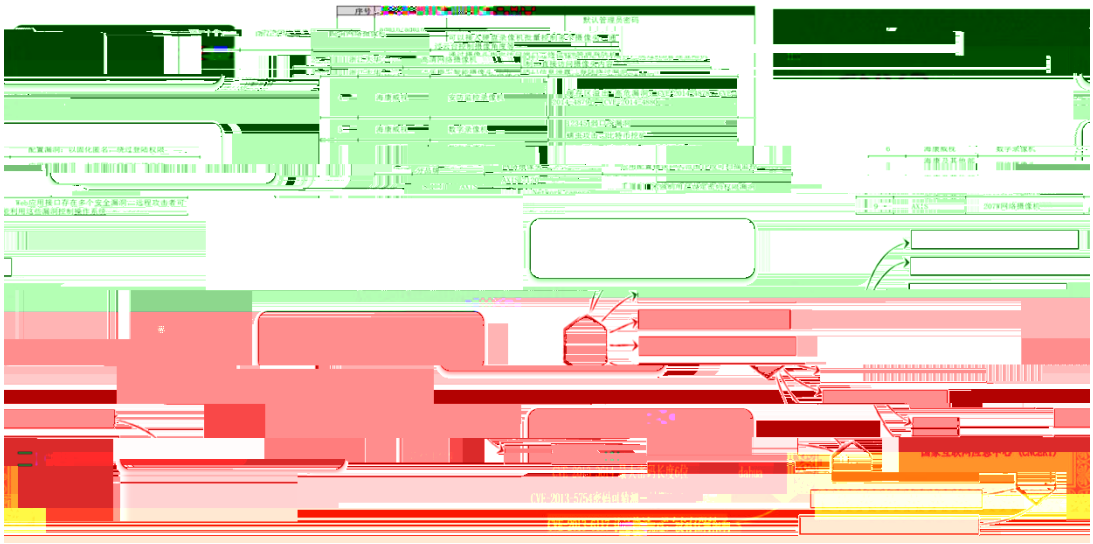
ŋ GPS 'Y

- ᵝ Ẇ ΰ ǐ ά ả ڀ ∖ í ˙ ◖ ╓
- ᵝ Ẇ ΰ ǐ ¸ ᴻ ڀ ∖ í ˙ ◖ ╓

∖ ʊ ǐ ᴊ ᵩ ³ Ḡ . ∖ ă '

Android л ⁄ ◖ ╓

- ᵝ Ẇ ė ◖ ╓



ɡ 34 ᵏ ″ ĭ Ṫ ⊦ ǐ ᴊ Ḡ . ∖ ă '

ᵏ ″ ĭ ḛ ẉ ᴳ ∖ Ⅱ ᶠ ф ΰ ǐ ∩ ჯ ჯ ǐ ᴊ Ḡ Ȁ ᵇ ⊣ И л ᴿ ᵩ ³ Ḡ Ḳ Ḿ ჯ ɔ

ᴎ ᴌ Ḡ T-Box Ḡ TSP Ḡ APP Ḡ ɜ ∩ ჯ ᵑ g в ɲ Ḡ ф Φ ■ Ḡ . ∖ Ẋ

п ệ ᴎ ˚ Ḡ . ∖ ă ' ь ɡ • ᵀ ° ᵝ Ẇ ჯ ǐ ᴊ ᴎ ᴌ ∧ ᴬ ڀ ∖ í ˙ ص ∖ ځ ج - ڈ ئ

'Y Authorization o ᵎ n п ˙ Ḿ ∩ ჯ í ˙ • ჯ ŕ ΰ ǐ ᵅ ð ڍ App ₱ щ ᴌ ᵮ Ṁ



´ ˙ Ṯ v ƒ Ḳ ڀ ɭ ⸢OBJ⸣ Ṫ í Ḡ ˀ ʜ‰´ ɣ ʊ̇ :

Ṫ í ˙ ˧˩˧ ˩˧ Ụ Ḡ

ɡ̇ ̈Ǫ í ˙ ˧˩˧ ˩˧ DCS Ḡ ˧ ˧˩˧˚ ‰´

ˡ ˩˧ ˥˧ ẑ í ˙ ʜ PLC ˧˩˧ ˩˧ Ụ Ḡ ɭ ∂

Ụ ˧˩˧ ˩˧ Ḡ ˥˧ ˧˥ ï ᵍ ɭ ∂ Ḿ Ṫ í ˙ ˧˩˧ ˩˧ ⸢OBJ⸣ ̈E ṛ Ḡ ɭ ∂

ƒ̣ ɒ Ṫ í ˙ ˧˩˧ ˩˧ Ụ Ḡ گ ï ̇H h̤

ɔ ˥ ˇ í ˧˩˧ ˩˧ ˩˧ ˩˧ Ḡ گ ï Ṁ̤

♦ δ Φ Ṫ í ˙ ˩˧ ˩˧ Ḡ ̇H h̤