01 پ ɭ ˚ g

Ὠ ΰ ɥɥ ᷤ Ȭ ڨ Ḥ ă ˝Y ‶H Ὠ ΰ U Ὠ ΰ א ῶ ̃H 03
Ὠ ΰ ɥ Ṫ ɥ ỵ ῳ ݘ ݘ ٩ › ݥ ѧ ٦ ת Ὸ ۅ ي ڽ˜ 03
Ὠ ΰ ɥ ỵ Ὠ ΰ ₦ ——2020ẇ Ὠ ΰ ṝ ừ 03
Ὠ ΰ ɥ ɫ ɰ ṕ ݿ ῷ ɥ ỵ 2020ẇ Ὠ ΰ ɫ ˉ ‶E Φ ừ ɫ ɰ 04
ã Ẇ ٹ Ὰ ἵ ݥ ⁄ Ọ Ḣ ٩ Ⱶ ݥ ѧ ă ˝ ã Ֆ 04

02 ݥ Φ ȭ

ٹ ̃Ḥ Ẏ Ụ Ọ ݘ ۅ ي ṝ Ẏ ȸ 05
Ṫ ɥ “ ” ݙ Ụ Ḣ Ὸ ṝ h 05
ٙ ٩ Ḣ ῶ ڽ ᾅ Ẁ Ȃ ѵ̄ ΰ ↑ " ɲ 05
ɺ ۏ Ẋ پ ̃Ὠ Ὠ . ǘ ٿ ã ẍ ἵ ᾅ ̃H ᾅ 06
ɺ ۏ Ὸ ṋ ڿ í ΰ 100% ΰ ѧ Ṡ ἵ ̃H 06
ɥ 12 06

03 Ὠ ΰ Φ ȭ

ῳ ڗ 2022ẇ ̃Ḥ Ẏ Ά ݘ › ῳ ˉ ṝ ˚ ݐ ἰ ٧ ڽ˜ 07
ῳ ڗ 2022ẇ א ἵ Ὠ ΰ ۅ ي ῳ ɰ ˚ ݐ ἰ ٧ ڽ˜ 07
א ἵ Ὠ ΰ ۅ ي ῳ ɰ ˚ ݐ ٦ ת | 07
‶H Ὰ ã ݘ ۅ ي — ò Ỹ ڂ ɫ Ὠ Ὰ ṝ 08
ṛ ȍ ò ڨ Ὠ ΰ ɺ ɫ IPv6 h ₩ɥ 08
ݥ ѧ ã Ֆ Ὠ ΰ Ụ ṝ 08

04 ڴ ˚ g

ĭ Ὠ ά ڵ ἵ ݥ 09
ﬂ ɫ ڝ Ὠ ά ₭ E ڵ ڨ ݥ ѧ APAN Ẁ 09
ℵ ╖ ڟ ٦ CEO ἵ ˝ ˊ ٩ Ḣ ṭ Z ἰ Ḣ ‶I ℵ ╖ ב ݥ ѧ ɥ ɥ ᾰ 10
ڨ ˜ ב AWSῳ 5G ݥ 10
LG U+ LSۏ ἵ _ ã SD WAN ˜ Ֆ Ạ ݥ 10
ݘ ٩ Ὠ ΰ Ụ ỵ 2022ẇ10 ITɲ ڼ 11
ל Ὠ ΰ ݥ Jisc ‶Y 11
Jisc Ὠ ỵ ‶Ὠ Ḣ ἵ έ ᾳ ừ ڨ Φ ڎ 11

05 ѵ Ά ĭ

12

Õմհ ڒ˝Y “ ˜ΗѺ ŭ Ụ Ѻ ŭ א ⃞ω ˜Ḥ ò Ȁ ˜ ɸ Ạ ấ
ɸ ώ و ۱ Ѻ ŭ ˚ ◊ Ẉ ή ۷ Ѻ ŭ ˚ ◊ ấ ɸ Ẓ ɾ ồ ב ›
ã̃ ɀ ۷ Ή ̧ ấ ɸ ĭ ♯ ڃ ؤ ⁄ Ọ Ή ؤ ۤ ב و ̧ ۷ Ή Ȁ Ȏ
۷ Ή₅ ۱₅ Ặ ₌ ■ Ѻ ŭ ۤ ´ Ȁ ồ Ȁ Ή Ѻ ŭ ۧ ۤ ´ . ڻ “ ”
ↄ ■ | ⌂ Ѻ Ặ ` ò ف ב “ ↕ Ẉ Ѻ ŭ Ấ

2020

Ĭ ˜ 2020ẉ Ὼ ΰ ⁄ ˉ Ở ˜H 53033.87 ⅝ ẉ 50178.12 ذ 5.69% ك ὤ ớ Ὼ ΰ ⁄ ˉ 42908.15 ⅝ ẉ ذ 7.15% GDP⅝ 4.22% " " Ὼ ڙ ʻY ⁄ " 4% " ف ĩ ⁵ 2012ẉ ٳ ف ⁄ ⁄ ẉ " 4% " ˝Y " 4%´ ‰ " ệ א ĩ Ὼ ΰ ⁄ ˉ ɿ Ὼ ΰ ب ⅝ ʿ . ڔ ˜H ⁄ ‗ ת Ṯ ˈ ⁄ ڐ ی ⁄ ف ⁄ 9ẉ ᾰ´ ‰ " 4%ˋH " Ὼ ΰ ⁄ ˉ ˜H ⁄ ‗ ớ ɋ ⁄ ˜ ├

ệ ├ Y ĩ ⁄ ɰ ɿ Ὼ ΰ ˈ ˘ ḯ ⁄ " Ὼ ΰ ⁄ ˉ " " Ὼ ΰ ˉ ˜Ḥ " " ȝ ⁄ ˉ ˜Ḥ " ذ ὑ ˝Y‰ ὦ ˝ ڽ › ف ˝Y‰ א ˋH ꜛ ỗ ẫ ɲ " ˝ ڲ ᾰ ⁄ Ὼ ΰ Ẕ Ỉ ڀ ɿ ⁄ ˉ ˜H ⁄ ﺹ ك ὤ ớ ⁄ ˉ ˚ ك ὤ ớ ⁄ ˉ Ẕ Ỉ ش Ẋ ق ᾰ̋ ˜Ḥ V ﺣ و ۑ ṛ ˝ ﺣ ⁄ Ὼ ΰ ⁄ "

ٳ ◊ Ὼ ΰ ɰ ᾰ Ὼ ΰ Ụ ᾰ

ٹ Ṛ ⁄ ⁄ ᾰ ˝ o Ṫ ⁄ ٹ ٹ ▌ ⁄ ⁄ ⁄ ⁄ ⁄ ڗ ⁄ ٹ ٹ ذ ẫ Ẉ ˘˜ ⁄ ⁄ ᾰ ˝ ĩ ۿ´ ĩ ⁄ ṛ ᾰ̋ ˈ ⁄ Ά ɿ ˜ ᾰ ˝ ẻ ỗ ĩ א ɿ ˜ ᾰ ˝ ق ℓ ڀ ɭ ‰ Ő Ặ ⁄ ⁄ ᾰ ˝ ẫ ȸ ĩ ò ق ˜ ⁄ ᾰ ˝ ẫ ȸ ώ ﺣ ˜ ᾰ ˝ ⁄ ỷ ọ ɫ ɭ ∂ ĩ ȍ ẫ ȸ ⁄ ⁄ Ặ ‗ ẫ ȸ ˜ א ڀ ɭ ĩ ⁄ / Ọ ˈH ⁄ ⁄ ᾰ ˝ ẫ ȸ ⁄ ẫ Ẉ ر Ά ‗ ộ ᾰ̋ ⁄ ĩ ⁄ / Ọ ˈH Ὰ ĩ ⁄ ⁄ ⁄ ڗ ᾰ ˝ ◊ ɭ ˝E ọ ɫ ⁄ ⁄ ⁄ ڗ ộ ỳ Ậ ۏ ᾰ ΰ ێ ǃ ẫ ȸ ⁄ ĩ ⁄ / Ọ ˈH Ὰ ĩ ⁄ ⁄ ⁄ ڗ ⌂ ת ˜Ḥ ⁵ í ọ ɫ ˜ ĩ ⁄ ⁄ ⁄ ڗ Φ h ˈ ỗ ⌂ ת ᾰ ˝ ẫ ⁄ ĩ ⁄ / Ọ ˈH Ὰ ĩ ⁄ ⁄ ⁄ ڗ ṛ ọ ɫ ⁄ ⁄ ⁄ ڗ ˈ ỗ ע א ɿ ظ

ٳ ◊ Ὼ ΰ ⁄ ɰ ⁄ ⁄ ᾰ

ᾰ ⱇ ᚼ “ ὉY ἋA ݑ ἕ ڿ ṝ ἋA ܥ ” ￼ “ Ặ ⱟ ἫH ἋA Ậ ۈ ”
ώ “ ἶ ♯ ἋA ỤἫH ΰ ἴ ڿ ⱇ ۈ Ạ ή ݐ ⱟ ἫH ˚ ˊ
Ẕ ܪ ˜ ᵥᵢᵢ ˚ ˊ Ậ ἋA ڄ ڃ Ụ̃ Ọ ڒ ṵ ṕ ṝ Ὤ
ܘ ╝ ⱁ ⱇ ⱟ ڼ 5G ܘ ⱱ Ṫ ΰ ἴ ɰ ⱴ ὬὮ ἶ ܘ ɳ
ⱇ

12

⊥ Ꝁ Ȧ ▌ ⃞ ═ ω̃ 12 Ȧ ᒣ Ḣ

■ ω̃ ں - ṩ ᒣ ỉ ɔ ω̃ ں ỉ ȍ ỷ ⊢ و ᒣ . ᒣ Ọ

▬ ᒣ ỉ ɔ Peaktek ω̃ ں ᒣ ᾿ ᾿ Ḣ ǖ ω̃ ں

⊤ ᾿ ᾿ Ụ Ḣ ω̃ ں ḥ ǘ Ọ̀ ɔ ᒣ Ḣ ω̃ ں ḥ ˇ ش ᒣ Ḣ

ω̃ ں ᒣ ṩ ᔭ

ᒧ ǖ ˊ ˜ Ȧ Ȧ ᔮ ᵀ ᕫ ᒣ ⃞ Ȧ ᔮ ⃞ ICT

Ȧ ᵓ ڢ

2022

⁞ ̃Ω ̃ ̣ ώ ̣ ̃Ḥ'Y Ά ح › ὠ ́ ̣ ̄ ° ̣ أ ̣ ∨ ∧ 313 ≤ ̓

̣ ئ ∧ 32

IPv6

“ 2021 IPv6 ”

IPv6

IPv6 IPv6

IPv6

5G

CIOE

12 ῳ 14 ῃ ݣ ἶ ܘ ᶙ 2021 ẉ "ἶ ܘ" ǰ ᾱ CERNET ܘ ᴧ Ọ ▌ ɔ Ṫ ᠤ ᠯ ἰ Ὠ ά ǰ

1998 ẉ ἰ Ὠ ά Ὑ ẩ ᠨ ᠯ IPv6 ؛ ڃ Ẑ CERNET-6BONE Ȁ ڨ Φ ἶ ܚ ᠤ Ẋ₇ ȷ IPv4 IPv6 ἶ ڽ ڎ ئ ᐧ IPv4 IPv6 ɲ ܘ Ẉ ◌ ص ■ ᾰ ᶐ ớ ڒ ئ % ۋ . ᠤ ڬ ˮ ᾗ ꜛ ỗ ˇ ᷧ Ἡ IVI ⌐ IPv4 ᠯ ڑ Ա ῑ IPv6 ᠯ ڑ Ἣ ῑ ᾰ IPv6 ٻ ᴧ IPv6 ˀ ἱ Ἡ ᠨ | ȷ ˀ ῶ ں IPv4 ˜ IPv6 Ἡ ῳ ᾱ ڿ ớ ȷ IPv6Ẉ ◌ ص ■ Ἡ ڒ ئ

ἶ ܘ The Internet Hall of Fame ᐧ ݣ ἶ ܘ Internet Society ISOC ẩ 2012 ẉ Ὲ ˜ ۵ ⌐ ἶ ܘ ῥ ٻ ɭ ˈ – ⊦ ɋ ɒ ἳ ⌐ ἶ ܘ ˜ ῳ ڪ ɲ

ᛚ ◊ ↓ ῃ ἷ ᾰ

APAN

ﬂ ᴧ ص Ὠ ά ἳ ᴧ ẩ Ẉ ٹ ᠯ ▌ Ὠ ά ᾰ ڤ APAN Ẉ ἳ ڨ ܘ ᴧ APAN 1996 ẉ 3 ῳ ῃ ᠨ ᒻ APEC ɲ Ω ڑ ẩ ⁝ Ὤ ȷ ố ẹ 1997 ẉ 6 ῳ ᾰ ᠨ ῃ ᐟ ☻ Ἀ ɦ ᠨ 21 ᾰ ᐨ ᠴ ` ᠯ ɥ ₇ ڨ ἶ ܘ Ἡ Ẕ ˀ ῥ . ᠤ APAN ∆ ἳ ᒷ ═ ᾱ Ẁ ת ǰ ᶐ ἶ ܘ ₆ ⌐ ἶ ܘ ۋ Ꮒ ῶ ʼ ڎ ٻ

ᛚ ◊ Ὠ ΰ ᠶ ɰ ᠤ ܘ ᾰ

13 CEO

ا ↄ ∫ ڑ 11 ا ﻻ ╖ ↄ ظ Ղ ﷺثẆ"EΦ غ Ω ˊ ~ ˝
ヽ'H ț Ẓ Ĵ 'H "I ﻻ ╖ ↄ ﻝ ﾉ ሐ ﷺሐ ă ف إ ﾉ ɤ ﻻ ╖ ↄ
ﻝ ﾉ ̃Ω ɹ ﷺ ´ ‰ ĩ Netflix Facebook ヶ ̃ Ụ ț

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Gartner 2021-2023

437 IT 111 Gartner

2021-2023 1. IT

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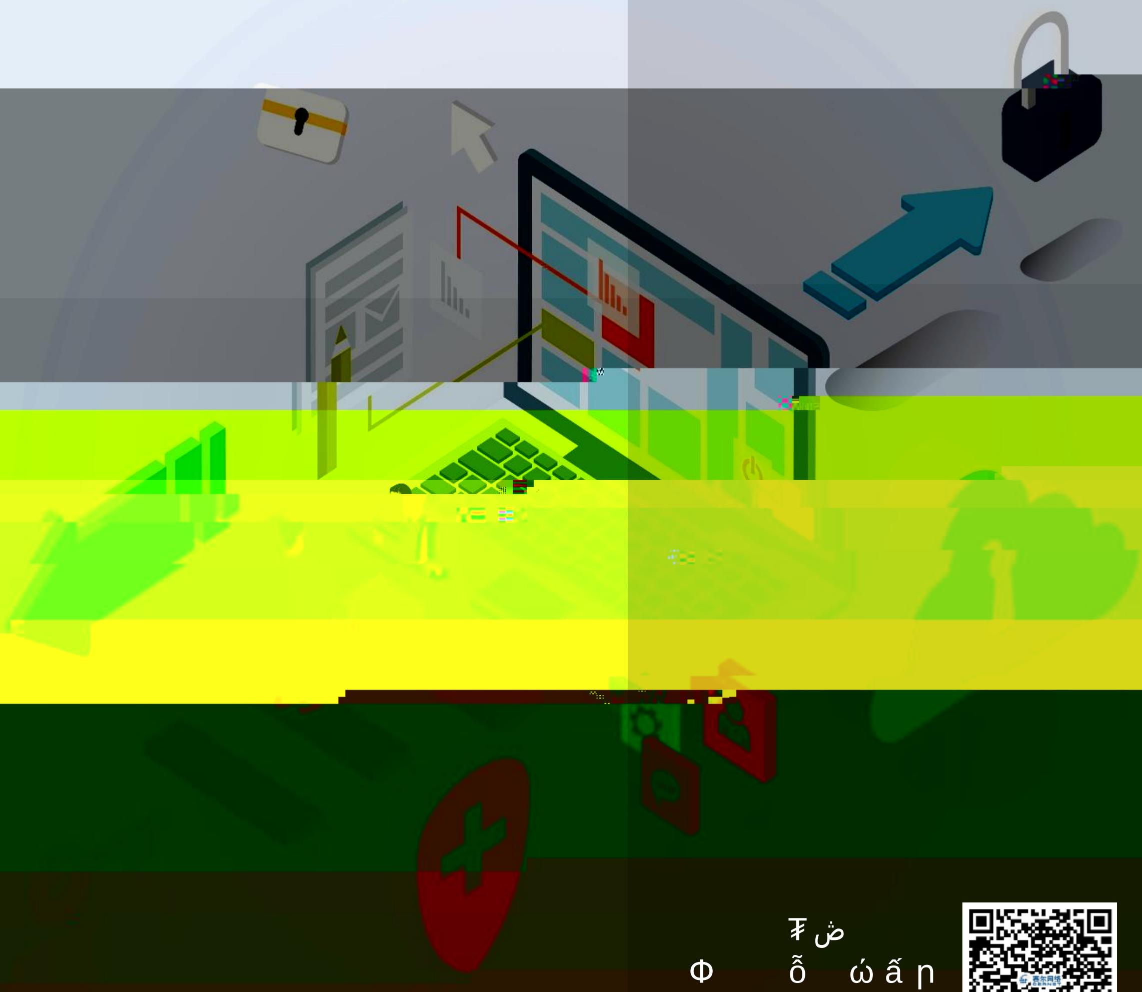
3 ÄÅ ñ Лаk



₮ ض
Φ õ ώ ấ ŋ
y ش̄ḤˈY

ɔ ʕ 6260 3794 ٧ ٩ scgl@cernet.com