CPU Cost [ms] Packets Sent HS [1/s] Client Library Distribution KA SA LvI Server Library Distribution Server Client Server Client 57.11 25.69 9.08 48.58 33.04 8.0 7.5 dilithium2 X25519 465 1.8 1.9 8.3 6.8 55.87 27.32 8.5 46.96 34.45 462 1.8 6 X25519 dilithium2_aes 1.7 1 60.55 25.22 7.2 29.62 7.0 6.6 dilithium3 372 54.52 X25519 2.0 2.1 8 57.82 25.35 7.9 50.94 31.54 8.4 6.8 dilithium3_aes X25519 455 1.9 1.9 8 62.65 23.19 7.4 57.10 27.10 7.1 6.5 2.1 12 X25519 dilithium5 412 2.4 57.15 27.38 55.50 29.47 7.2 dilithium5_aes 360 2.0 12 7.5 X25519 25.30 74.60 14.87 59.43 6.7 285 3.2 2.5 5 X25519 falcon1024 51.69 67.46 8.0 7.1 X25519 falcon512 404 2.2 2.1 4 18.56 6.9 30.68 58.68 23.43 8.0 7.0 6.3 59.90 23.82 X25519 p256_dilithium2 400 1.9 2.6 6 19.80 6.3 24.04 67.24 61.06 X25519 p256_falcon512 370 2.3 2.8 4 80.94 96.50 12.53 27 X25519 p256_sphincs128 58 24.4 5.8 9.68 76.95 14.77 83.27 185 X25519 p384_dilithium3 4.8 7.9 9 96.57 88.12 7.6 33 41.5 13.1 54 X25519 p384_sphincs192 89.05 6.1 92.14 112 8.6 14.9 12 X25519 p521_dilithium5 93.25 91.57 102 9.9 15.0 6 X25519 p521_falcon1024 98.38 92.61 p521_sphincs256 16 90.3 20.7 74 X25519 87.56 56.77 6.8 6.3 X25519 rsa3072_dilithium2 181 6.9 2.3 8 25.00 58.20 44.94 9.92 7.6 597 1.7 3 8.4 34.90 X25519 1.6 rsa:1024 77.37 13.27 45.54 34.62 8.73 7.5 X25519 rsa:2048 402 3.1 1.9 3 89.15 6.4 47.77 35.89 8.0 6.3 X25519 rsa:3072 215 6.6 2.1 3 94.19 50.89 32.09 8.0 6.8 rsa:4096 2.3 3 X25519 117 12.6 1 73.85 96.56 60 23.9 5.3 27 16.65 X25519 sphincs128 96.75 74.34 19.09 39 38.5 7.3 54 X25519 sphincs192 1 98.16 75.04 19.93 X25519 20 83.3 8.3 74 sphincs256 48.17 13.27 74.21 11.10 9.35 bikel1 dilithium2 231 1.8 6.5 7 2 7 44.59 30.80 13.15 6.0 75.38 10.50 9.46 224 1.8 6.4 2 dilithium2_aes bikel1 58.10 24.40 73.60 12.97 8.99 5 2 10.09 bikel1 falcon512 230 2.4 6.6 51.23 29.16 12.15 68.06 19.29 8.0 1.9 7.2 7 2 bikel1 p256_dilithium2 213 p256_falcon512 20.67 5 60.19 23.02 9.94 67.20 8.1 bikel1 211 2.5 7.2 2 93.90 47.91 41.24 7.7 bikel1 p256_sphincs128 57 24.4 10.4 28 2 16.47 85.52 8.2 68.53 10.92 183 6.7 7.0 9 2 bikel1 rsa3072_dilithium2 48.17 29.68 14.13 9.72 8.60 77.93 2 bikel1 239 1.8 6.3 4 rsa:1024 71.15 15.35 7.4 76.99 9.47 8.5 239 4 2 bikel1 rsa:2048 3.3 6.4 87.57 7.1 73.99 12.22 9.66 rsa:3072 202 6.4 6.6 4 2 bikel1 71.47 93.95 13.95 11.05 rsa:4096 117 12.7 7.0 4 2 bikel1 94.24 50.12 35.91 9.30 28 57 24.0 9.9 2 bikel1 sphincs128 46.93 16.75 33.06 31.17 dilithium2 387 1.9 2.3 9 2 27.11 6.4 26.06 7.5 hac128 28.73 44.13 18.99 31.26 31.04 27.02 6.0 7.0 dilithium2_aes 373 1.8 2.2 9 2 hqc128 35.98 13.10 6.2 25.79 370 7 2 59.29 6.5 2.3 2.5 hqc128 falcon512 48.31 16.99 6.7 23.54 7.4 21.65 46.21 9 2 hqc128 p256_dilithium2 336 2.0 3.0 59.08 19.09 12.82 49.12 20.27 6.7 p256_falcon512 7 2 hqc128 315 2.5 3.1 95.18 71.92 p256_sphincs128 6.2 11.70 11.67 24.2 30 2 59 hqc128 84.93 35.70 31.16 22.44 rsa3072_dilithium2 190 6.9 2 7.2 hqc128 2.9 11 48.06 18.03 34.17 28.67 27.38 7.7 6 2 536 1.8 2.0 hqc128 rsa:1024 13.30 10.07 71.92 30.95 30.01 28.34 7.1 rsa:2048 390 3.1 2.3 6 2 hac128 6.2 87.04 31.88 28.76 26.87 6.9 rsa:3072 213 6.7 2.7 6 2 hqc128 92.28 35.28 122 12.9 2.9 6 2 30.79 25.60 rsa: 4096 hqc128 95.43 67.49 hqc128 sphincs128 60 23.8 5.7 30 2 14.49 | 13.24 | 49.71 28.16 11.74 6.4 40.63 34.01 14.16 8.67 kyber512 dilithium2 473 1.6 1.7 6 1 27.77 12.70 6.8 49.35 37.86 35.15 14.10 8.5 522 1.5 1.7 6 kyber512 dilithium2_aes 20.61 9.06 6.4 33.83 13.09 6.9 61.89 42.72 420 2.1 1.9 4 kyber512 falcon512 52.59 12.58 6.4 54.20 25.31 10.25 8.1 26.14 p256_dilithium2 427 1.7 2.5 6 kyber512 56.00 63.60 20.36 8.60 23.44 10.06 7.4 p256_falcon512 345 2.3 2.5 4 kvber512 92.74 78.72 58 27 13.56 kyber512 p256_sphincs128 23.9 5.7 47.20 rsa3072_dilithium2 182 6.7 8 87.44 7.2 31.31 10.17 7.2 kyber512 2.4 51.17 11.75 6.7 40.48 32.33 15.57 8.4 561 1.5 1.6 3 kyber512 rsa:1024 74.37 14.70 6.2 39.03 34.99 13.87 8.76 341 3.0 1.8 3 kyber512 rsa:2048 88.49 6.5 39.08 38.31 12.84 7.1 kvber512 rsa:3072 199 6.5 2.1 3 14.21 6.6 94.17 39.45 34.86 kyber512 rsa:4096 117 12.7 2.4 3 95.62 27 14.53 59 24.1 5.1 kyber512 sphincs128 53.61 26.95 9.83 7.0 42.40 34.96 11.28 8.2 534 6 kyber90s512 dilithium2 1.5 1.7 51.55 28.82 10.93 6.3 39.99 35.30 11.91 9.16 550 kyber90s512 dilithium2_aes 1.4 1.6 6 64.66 19.75 8.51 44.95 34.27 10.38 6.8 2.1 1.9 415 4 kyber90s512 falcon512 1 2.4 54.51 27.37 9.34 6.2 55.07 27.69 7.7 7.5 p256_dilithium2 421 1.7 6 kyber90s512 65.44 58.47 26.22 18.75 7.3 7.5 387 2.2 2.5 4 kyber90s512 p256_falcon512 94.73 80.01 kyber90s512 58 24.1 5.7 27 p256_sphincs128 87.16 7.7 49.64 8.1 6.6 kyber90s512 rsa3072_dilithium2 185 6.6 2.4 8 53.85 27.33 10.07 39.59 35.68 13.07 8.3 kyber90s512 rsa:1024 562 1.5 1.5 3 76.24 13.25 41.05 36.43 12.36 **7.6** kyber90s512 rsa:2048 340 3.0 1.8 3 11.32 7.0 88.47 6.0 40.77 38.10 kyber90s512 rsa:3072 201 6.5 2.0 3 94.37 41.05 33.46 9.63 7.2 rsa:4096 12.9 3 kyber90s512 116 2.4 1 96.42 15.66 76.70 sphincs128 60 23.7 5.1 27 kyber90s512 58.27 7.0 7.0 50.55 29.78 8.4 7.9 428 1.9 2.1 6 p256 dilithium2 p256 56.72 26.62 7.4 6.7 47.96 31.66 8.67 8.0 dilithium2_aes 404 1.9 2.0 6 1 7.4 6.9 67.90 18.02 6.2 53.51 29.73 388 2.4 2.2 4 p256 falcon512 58.58 7.5 6.9 p256 p256_dilithium2 381 2.0 2.8 6 24.82 60.73 22.86 1 18.76 59.94 66.15 6.1 24.45 p256 p256_falcon512 354 2.6 2.9 4 96.31 79.96 p256 p256_sphincs128 58 24.4 6.1 27 86.04 55.33 8.1 28.69 7.4 6.3 p256 8 rsa3072_dilithium2 189 7.0 2.7 58.73 24.38 44.91 8.3 6.6 34.69 9.48 8.2 539 p256 rsa:1024 1.8 1.8 p256 rsa:2048 384 3.2 2.0 3 p256 88.46 6.8 50.51 30.12 8.4 6.8 191 3 rsa:3072 6.7 2.1 94.06 49.58 33.06 7.7 7.3 rsa:4096 3 p256 121 13.0 2.6 73.89 14.95 p256 24.0 27 96.30 60 5.5 sphincs128 1 11.36 7.0 52.64 24.48 70.28 15.57 9.81 p256_bikel1 2.2 7 2 dilithium2 211 6.9 52.46 11.72 6.6 15.37 8.86 p256_bikel1 2.1 6.9 7 2 dilithium2_aes 213 20.35 8.94 17.07 p256_bikel1 5 63.01 69.86 8.51 falcon512 207 2.7 7.0 2 54.85 24.05 11.25 7.8 64.59 22.21 8.70 p256_bikel1 p256_dilithium2 198 2.3 7.5 7 2 16.56 8.89 63.01 24.75 8.2 5 67.34 p256_falcon512 197 2.8 7.6 2 p256_bikel1 96.76 43.26 42.65 p256_sphincs128 24.3 28 2 9.73 p256_bikel1 56 11.0 84.92 8.4 64.20 20.73 10.68 172 2 p256_bikel1 rsa3072_dilithium2 7.1 7.5 9 54.54 11.80 6.5 72.46 13.88 9.25 204 2.2 6.8 4 2 p256_bikel1 rsa:1024 14.91 6.5 70.65 14.90 9.69 rsa:2048 217 3.6 6.9 4 2 p256_bikel1 16.17 10.80 87.05 6.8 68.16 192 6.8 7.1 4 2 p256_bikel1 rsa:3072 rsa:4096 112 13.2 7.4 4 2 94.12 68.43 17.17 9.01 p256_bikel1 96.26 48.63 9.39 sphincs128 57 24.1 10.5 28 2 p256_bikel1 53.19 21.13 14.52 7.4 25.64 23.96 350 2.3 9 40.42 8.3 p256_hqc128 dilithium2 2.8 2 50.77 25.52 24.49 23.24 16.18 7.9 38.76 7.9 363 2.1 9 p256_hqc128 dilithium2_aes 2.8 2 61.74 16.58 12.96 7.0 42.69 24.74 6.7 23.92 falcon512 356 7 2 p256_hqc128 2.7 2.9 53.47 21.43 14.37 7.1 50.34 21.68 19.25 7.4 327 2.3 9 2 p256_hqc128 p256_dilithium2 3.4 16.59 11.88 6.9 52.74 20.69 63.00 18.41 p256_falcon512 320 2.8 7 2 6.8 p256_hqc128 3.5 93.34 69.04 11.67 11. 30 2 58 24.6 6.8 p256_hqc128 p256_sphincs128 45.25 84.71 22.72 21.09 rsa3072_dilithium2 180 7.3 3.4 11 2 p256_hqc128 51.42 15.65 7.0 35.90 27.29 26.01 8.81 p256_hqc128 rsa:1024 417 2.2 2.5 6 2 72.81 12.48 9.44 37.64 25.89 25.62 8.1 337 3.6 2.7 6 2 rsa:2048 p256_hqc128 40.21 86.47 6.7 25.53 25.25 p256_hqc128 rsa:3072 197 7.1 3.0 6 2 7.3 93.38 42.14 26.63 22.34 p256_hqc128 rsa:4096 116 13.3 3.3 6 2 67.88 96.34 14.65 12.87 sphincs128 59 24.3 6.0 30 2 p256_hqc128 54.87 10.83 7.1 48.25 29.02 10.78 9.48 p256_kyber512 dilithium2 382 2.0 2.2 6 54.40 24.07 10.70 7.1 44.82 30.86 2.2 12.37 9.77 408 1.9 6 dilithium2_aes p256_kyber512 63.93 17.85 8.95 7.2 50.22 27.89 10.70 8.1 p256_kyber512 falcon512 374 2.4 2.4 4 21.67 | 10.32 | 7.6 23.40 57.99 57.70 9.07 8.0 2.0 6 p256_kyber512 p256_dilithium2 351 2.9 334 2.6 2.9 4 65.65 18.13 8.1 6.4 60.88 21.87 8.3 7.2 p256_falcon512 p256_kyber512 12.64 97.04 p256_sphincs128 57 24.1 6.2 27 p256_kyber512 86.50 52.86 8.92 8.58 7.2 2.8 8 p256_kyber512 rsa3072_dilithium2 171 56.36 10.06 7.4 43.46 31.12 13.11 9.89 p256_kyber512 rsa:1024 385 2.0 2.0 3 13.67 6.9 74.25 42.81 33.26 11.79 9.57 p256_kyber512 rsa:2048 302 3.3 2.2 3 87.22 48.55 30.01 2.5 3 6.1 11.04 8.56 185 6.9 p256_kyber512 rsa:3072 1 94.21 48.28 30.87 10.52 8.4 113 12.9 2.8 3 p256_kyber512 rsa:4096 96.32 75.82 14.97 27 58 24.2 5.5 p256_kyber512 sphincs128 48.76 16.67 80.60 8.99 27.21 110 2.2 16.3 10 3 bikel3 dilithium3 42.62 28.02 16.77 80.59 9.56 bikel3 dilithium3_aes 110 2.2 16.0 10 3 78.53 56.35 32.66 13.18 83 4.9 21.9 11 3 bikel3 p384_dilithium3 97.56 49.92 40.30 6.0 35 40.7 27.3 56 3 bikel3 p384_sphincs192 69.24 82.12 16.67 9.65 9.30 5 113 3.4 15.9 3 bikel3 rsa:2048 94.29 81.37 8.5 rsa:4096 106 13.0 16.3 5 3 bikel3 62.18 24.80 96.75 sphincs192 38 38.1 21.7 56 3 6.7 bikel3 46.64 40.24 24.40 21.68 30.66 6.3 hqc192 dilithium3 334 2.4 3.3 14 4 20.28 6.2 44.09 25.14 21.17 41.60 20.32 28.75 6.2 hqc192 dilithium3_aes 339 2.3 3.1 14 4 72.76 10.80 10.66 73.35 14.66 8.3 hqc192 p384_dilithium3 171 5.2 8.9 14 4 96.60 9.36 8.4 76.76 hqc192 41.2 60 4 p384_sphincs192 32 14.3 65.92 16.58 12.25 44.26 25.17 371 3.4 3.0 9 4 22.20 hqc192 rsa:2048 91.25 37.55 30.74 23.03 13.2 9 3.7 hqc192 rsa:4096 117 4 95.51 56.79 16.04 hqc192 sphincs192 38 38.9 8.7 60 53.26 11.38 6.3 44.49 30.14 13.67 8.2 kyber768 dilithium3 403 1.8 1.9 8 2 51.66 12.84 <mark>6.1</mark> 41.26 32.77 15.07 7.3 454 1.7 1.8 8 2 kyber768 dilithium3_aes 77.51 82.54 2 13.12 9.18 kyber768 p384_dilithium3 179 4.6 7.7 9 83.74 97.14 7.9 40.6 54 2 kyber768 p384_sphincs192 33 13.0 75.33 37.68 35.18 13.44 6.9 16.58 8.1 335 3.0 1.9 3 2 kyber768 rsa:2048 14.08 7.0 94.37 41.37 35.50 kyber768 rsa:4096 117 12.6 2.3 3 2 70.20 96.58 16.71 kyber768 sphincs192 39 37.9 7.4 54 2 54.93 8.96 6.2 27.30 46.30 32.74 9.99 7.5 kyber90s768 dilithium3 485 1.7 2.0 8 2 54.37 26.81 44.27 33.53 10.13 6.1 11.57 8.2 kyber90s768 dilithium3_aes 516 1.6 1.8 8 2 78.29 13.08 83.24 182 9 2 9.19 p384_dilithium3 4.6 7.7 kyber90s768 96.50 87.62 7.7 12.8 2 kyber90s768 p384_sphincs192 33 40.7 54 12.84 8.54 75.14 14.64 38.08 37.76 3 2 kyber90s768 rsa:2048 332 3.0 1.8 94.83 41.17 33.99 117 12.5 2.4 3 2 9.83 7.2 kyber90s768 rsa: 4096 72.51 97.69 kyber90s768 sphincs192 39 38.1 7.2 54 2 10.10 84.58 85.71 9.03 122 8 p384 dilithium3 7.3 8.3 1 8.75 8.58 85.44 85.24 122 7.2 p384 dilithium3_aes 8.3 8 12.52 6.6 80.73 89.31 91 p384 p384_dilithium3 9.8 13.9 9 97.50 88.97 45.9 19.3 54 27 p384 p384_sphincs192 1 10.46 90.79 83.47 rsa:2048 8.6 8.1 3 p384 111 96.33 85.44 9.48 66 17.8 8.4 3 p384 rsa:4096 1 95.87 89.22 8.1 p384 sphincs192 31 43.4 13.6 54 56.63 32.22 83.81 8.2 6.8 dilithium3 p384_bikel3 65 7.6 22.7 10 3 8.2 31.25 7.0 dilithium3_aes 66 7.3 22.7 10 84.24 56.83 p384_bikel3 3 43.42 88.25 6.5 47.34 p384_bikel3 p384_dilithium3 54 10.1 28.6 11 3 96.40 53.90 36.07 p384_bikel3 p384_sphincs192 29 46.6 33.9 56 3 85.17 6.9 57.97 30.02 7.0 66 9.0 22.6 p384_bikel3 rsa:2048 5 3 7.0 94.48 56.87 32.69 rsa:4096 66 18.3 22.9 5 p384_bikel3 3 97.93 47.88 40.94 6.4 32 43.3 28.1 56 p384_bikel3 sphincs192 3 7.5 6.3 81.51 8.65 108 8.0 9.6 p384 hqc192 dilithium3 14 81.38 8.3 7.4 73.08 12.97 10.74 p384_hqc192 dilithium3_aes 109 7.7 9.5 14 4 86.88 82.75 8.59 p384_dilithium3 82 10.7 15.3 14 4 p384_hqc192 6.9 85.70 27 60 95.80 p384_hqc192 p384_sphincs192 46.6 20.5 4 6.6 6.1 83.32 74.70 13.38 7.5 p384_hqc192 rsa:2048 113 9.4 9.5 9 4 93.69 73.93 13.17 9.68 p384_hqc192 rsa:4096 64 18.6 9.9 9 4 9.09 6.7 92.87 82.13 p384_hqc192 sphincs192 31 43.8 15.0 60 4 8.0 8.0 85.91 84.21 dilithium3 p384_kyber768 115 7.4 8.6 8 2 9.27 81.20 11.41 84.40 dilithium3_aes 115 7.3 8.4 8 2 p384_kyber768 89.37 89.16 p384_kyber768 p384_dilithium3 83 10.2 14.1 9 2 89.27 96.32 p384_sphincs192 27 45.9 19.1 54 2 p384_kyber768 6.3 8.59 87.97 84.32 2 p384_kyber768 rsa:2048 117 8.7 8.3 3 91.58 83.58 8.63 62 18.3 3 2 p384_kyber768 rsa:4096 8.7 88.20 p384_kyber768 sphincs192 31 42.8 13.8 54 2 93.73 6.1 42.26 31.24 17.52 7.5 50.53 28.10 14.69 4.6 21 251 3.1 6 hqc256 dilithium5 16.34 39.41 33.61 20.23 52.80 24.48 dilithium5_aes 257 4.4 21 2.9 6 hqc256 56.91 14.46 23.35 13.35 49.48 30.15 245 4.1 4.7 14 hqc256 falcon1024 6 10.30 45.45 35.56 12.10 84.45 100 9.5 17.3 21 hqc256 p521_dilithium5 6 17.27 45.03 hqc256 p521_falcon1024 95 10.6 17.5 15 6 27.88 17.73 **6.3** 73.93 11.95 96.93 80.88 p521_sphincs256 16 90.5 22.7 83 6 hqc256 59.53 57.64 23.40 12.32 19.00 16.33 rsa:2048 298 4.1 4.1 12 6 hqc256 89.01 20.52 53.82 18.56 hqc256 rsa:4096 105 13.7 4.6 12 6 96.97 58.36 14.13 24.10 sphincs256 84.2 hqc256 20 10.3 83 6 54.20 25.27 12.09 6.0 13.28 7.1 48.83 419 2.0 2 dilithium5 2.3 13 kyber1024 52.32 26.05 13.03 6.1 43.55 32.62 14.70 6.7 447 2.1 13 2 kyber1024 dilithium5_aes 1.8 70.16 14.63 7.5 51.96 27.33 13.39 296 3.0 2.5 6 2 kyber1024 falcon1024 89.48 89.04 p521_dilithium5 107 8.6 15.0 13 2 kvber1024 87.62 90.29 p521_falcon1024 kyber1024 99 9.6 15.1 7 2 87.58 16 90.3 21.0 75 2 kyber1024 p521_sphincs256 72.37 15.68 7.9 36.26 16.73 8.0 32.67 kyber1024 rsa:2048 304 3.1 1.8 4 2 94.01 39.64 15.04 7.1 kyber1024 rsa:4096 117 12.6 2.4 4 2 70.51 75 98.29 15.66 sphincs256 19 85.0 8.4 2 kvber1024 9.84 6.5 56.17 25.38 50.03 29.74 10.12 7.0 kyber90s1024 dilithium5 436 1.9 2.3 13 2 10.54 47.13 32.34 11.40 6.9 2 480 1.7 2.0 13 kyber90s1024 dilithium5_aes 11.14 71.68 14.96 52.70 27.98 2 kyber90s1024 falcon1024 307 3.0 2.4 6 90.52 89.78 2 kyber90s1024 p521_dilithium5 107 8.6 14.9 13 14.9 2 97.67 92.53 p521_falcon1024 100 9.5 7 kyber90s1024 92.61 p521_sphincs256 90.0 20.3 75 2 98.78 kyber90s1024 16 74.95 14.61 37.00 13.78 8.0 36.88 329 1.8 4 2 kyber90s1024 rsa:2048 3.1 94.09 4 11.56 7.3 kyber90s1024 rsa:4096 116 12.8 2.3 2 97.85 76.22 16.35 sphincs256 kyber90s1024 20 83.2 8.1 75 2 12 94.38 93.68 49 14.7 p521 dilithium5 17.2 1 92.86 92.21 p521 dilithium5_aes 54 14.8 17.2 12 89.72 92.33 45 5 p521 falcon1024 16.0 17.4 1 94.40 95.16 p521 39 20.7 30.0 12 p521_dilithium5 1 93.82 95.82 p521_falcon1024 39 22.0 29.9 6 p521 99.15 90.61 p521_sphincs256 13 102.8 36.7 74 p521 1 rsa:2048 55 14.8 16.8 3 93.62 92.32 p521 1 93.09 p521 rsa:4096 42 25.1 17.1 3 95.26 p521 98.49 87.19 sphincs256 15 96.3 23.4 74 1 85.41 7.7 81.74 11.98 p521_hqc256 dilithium5 54 16.4 20.1 21 6 8.3 83.36 80.15 13.63 42 p521_hqc256 dilithium5_aes 15.7 19.5 21 6 85.27 7.5 80.86 13.66 20.3 p521_hqc256 39 16.4 14 falcon1024 6 91.97 89.42 p521_hqc256 p521_dilithium5 41 22.2 32.5 21 6 6.2 93.39 88.92 37 22.7 32.3 p521_hqc256 p521_falcon1024 15 6 102.8 97.70 90.00 p521_hqc256 p521_sphincs256 13 38.1 83 6 89.36 80.80 11.78 55 p521_hqc256 rsa:2048 17.7 19.5 12 6 14.72 93.43 78.08 rsa:4096 40 26.1 19.9 13 6 p521_hqc256 7.7 97.42 83.39 p521_hqc256 sphincs256 15 96.7 25.9 83 6 86.18 8.99 92.03 p521_kyber1024 dilithium5 42 14.6 17.4 13 2 8.58 84.20 90.01 dilithium5_aes 45 14.6 17.2 13 2 p521_kyber1024 88.34 7.3 91.64 p521_kyber1024 falcon1024 44 15.7 17.5 6 2 93.15 94.47 38 30.1 13 2 p521_kyber1024 p521_dilithium5 21.2 2 95.66 95.82 p521_kyber1024 p521_falcon1024 38 21.8 30.1 7 98.48 94.08 13 75 2 p521_kyber1024 p521_sphincs256 102.5 35.6 6.9 p521_kyber1024 42 2 89.53 91.02 15.9 17.1 4 rsa:2048 94.66 rsa:4096 41 25.2 4 2 91.92 p521_kyber1024 17.3 7.1 98.13 90.33 15 95.7 23.2 75 2 p521_kyber1024 sphincs256 libc-2.31.so python3.9 libcrypto.so.1.1 kernel.kallsyms ixgbe Legend: Pre-Quantum Hybrid libssl.so.1.1