

| Krypton NeCTAR Cloud VM | | | | | | | | | | | |
|-------------------------|---------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Total | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 |
| eddsa_libnacl.py | A1 | 0.737154007 | 1.22525692 | 1.843674898 | 2.268166065 | 2.82523489 | 3.164525986 | 3.7466681 | 3.92343688 | 4.818909168 | 4.905833006 |
| eddsa_pynacl.py | A2 | 0.730074167 | 1.292459011 | 1.587222099 | 2.027951002 | 2.494320869 | 2.852205992 | 3.2395432 | 3.66467905 | 4.218097925 | 4.339344978 |
| eddsa_25519.py | A3 | 44.23239493 | 92.5908041 | 134.923605 | 178.0696239 | 236.5663102 | 259.4139152 | 301.039326 | 364.570596 | 404.3988709 | 431.1713789 |
| ecdsa_pyca.py | A4 | 9.508374214 | 19.22832894 | 29.73819685 | 38.218153 | 48.94185901 | 61.59703803 | 71.84170604 | 75.81750607 | 85.87281489 | 93.41846585 |
| ecdsa_fast.py | A5 | 19.16612506 | 37.22764683 | 51.79768205 | 72.10210681 | 86.82713103 | 110.138643 | 128.3171399 | 150.2560959 | 157.417125 | 173.1205812 |
| Lamport.py | A6 | 8.625602007 | 12.77343917 | 20.06960511 | 24.7940731 | 32.76689005 | 39.8557899 | 50.27370286 | 54.95673108 | 55.98384285 | 60.97025394 |
| rsa_pyca.py | A7 | 173.057776 | 303.918386 | 482.6531432 | 623.003083 | 779.521966 | 947.7326779 | 1126.465735 | 1293.344769 | 1443.542276 | 1514.745211 |
| dsa_pyca.py | A8 | 176.3814411 | 359.8523071 | 565.7936041 | 774.8677142 | 979.2884769 | 1160.42264 | 1440.992059 | 1622.11969 | 1767.872176 | 1830.841914 |
| | | | | | | | | | | | |
| | Key Gen | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 |
| eddsa_libnacl.py | A1 | 0.156105757 | 0.260820866 | 0.39507246 | 0.482633829 | 0.611633539 | 0.676994801 | 0.82226491 | 0.841701269 | 1.054172993 | 1.044581652 |
| eddsa_pynacl.py | A2 | 0.1709795 | 0.306952238 | 0.383260012 | 0.49313736 | 0.590542078 | 0.680860281 | 0.77125597 | 0.872943163 | 1.047251701 | 1.026942253 |
| eddsa_25519.py | A3 | 8.248426199 | 17.19734383 | 25.07150364 | 33.08139396 | 44.34894276 | 48.30541992 | 56.03979969 | 67.77828288 | 75.28037786 | 80.32297444 |
| ecdsa_pyca.py | A4 | 3.542912006 | 7.184781075 | 11.16995263 | 14.25402331 | 18.22980762 | 22.95973539 | 26.84980297 | 28.28008723 | 31.97301388 | 34.76207709 |
| ecdsa_fast.py | A5 | 6.682162046 | 12.9932282 | 18.10763311 | 25.17496347 | 30.35726547 | 38.39182997 | 44.7647953 | 52.5189352 | 54.92479491 | 60.44519401 |
| Lamport.py | A6 | 8.104088306 | 11.96241832 | 18.78673029 | 23.26437402 | 30.72850919 | 37.29274035 | 47.14455986 | 51.52258611 | 52.4431653 | 57.12043858 |
| rsa_pyca.py | A7 | 167.9972985 | 295.0505171 | 468.2449756 | 604.3874695 | 756.3170781 | 919.4577258 | 1092.952193 | 1254.942085 | 1400.218388 | 1470.4019 |
| dsa_pyca.py | A8 | 175.2587302 | 357.5281057 | 562.2470579 | 770.0276287 | 973.0873778 | 1153.139525 | 1431.949466 | 1611.911932 | 1756.666671 | 1819.299451 |
| | | | | | | | | | | | |
| | Sign | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 |
| eddsa_libnacl.py | A1 | 0.15125227 | 0.246485949 | 0.364190102 | 0.446854115 | 0.559139729 | 0.616137743 | 0.727957726 | 0.767063618 | 0.918316126 | 0.933630228 |
| eddsa_pynacl.py | A2 | 0.167114019 | 0.303624868 | 0.376552105 | 0.476960897 | 0.59343791 | 0.673522949 | 0.761993647 | 0.846236706 | 0.983445883 | 1.028750181 |
| eddsa_25519.py | A3 | 8.332835913 | 17.3562026 | 25.3406148 | 33.39835858 | 44.27300787 | 48.65641117 | 56.42387342 | 68.38452959 | 75.8982625 | 80.75785232 |
| ecdsa_pyca.py | A4 | 3.434647083 | 6.951009989 | 10.72755408 | 13.79585552 | 17.79220295 | 22.29355311 | 25.93801761 | 27.43159056 | 31.09693837 | 33.8366406 |
| ecdsa_fast.py | A5 | 6.77016449 | 13.11141658 | 18.20898891 | 25.42832851 | 30.5928 | | | | | |

| | Total | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 |
|------------------|---------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| eddsa_libnacl.py | A1 | 0.737154007 | 1.22525692 | 1.843674898 | 2.268166065 | 2.82523489 | 3.164525986 | 3.7466681 | 3.92343688 | 4.818909168 | 4.905833006 |
| eddsa_pynacl.py | A2 | 0.730074167 | 1.292459011 | 1.587222099 | 2.027951002 | 2.494320869 | 2.852205992 | 3.2395432 | 3.66467905 | 4.218097925 | 4.339344978 |
| eddsa_25519.py | A3 | 44.23239493 | 92.5908041 | 134.923605 | 178.0696239 | 236.5663102 | 259.4139152 | 301.039326 | 364.570596 | 404.3988709 | 431.1713789 |
| ecdsa_pyca.py | A4 | 9.508374214 | 19.22832894 | 29.73819685 | 38.218153 | 48.94185901 | 61.59703803 | 71.84170604 | 75.81750607 | 85.87281489 | 93.41846585 |
| ecdsa_fast.py | A5 | 19.16612506 | 37.22764683 | 51.79768205 | 72.10210681 | 86.82713103 | 110.138643 | 128.3171399 | 150.2560959 | 157.417125 | 173.1205812 |
| Lamport.py | A6 | 8.625602007 | 12.77343917 | 20.06960511 | 24.7940731 | 32.76689005 | 39.8557899 | 50.27370286 | 54.95673108 | 55.98384285 | 60.97025394 |
| rsa_pyca.py | A7 | 173.057776 | 303.918386 | 482.6531432 | 623.003083 | 779.521966 | 947.7326779 | 1126.465735 | 1293.344769 | 1443.542276 | 1514.745211 |
| dsa_pyca.py | A8 | 176.3814411 | 359.8523071 | 565.7936041 | 774.8677142 | 979.2884769 | 1160.42264 | 1440.992059 | 1622.11969 | 1767.872176 | 1830.841914 |
| | | | | | | | | | | | |
| | Key Gen | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 |
| eddsa_libnacl.py | A1 | 0.156105757 | 0.260820866 | 0.39507246 | 0.482633829 | 0.611633539 | 0.676994801 | 0.82226491 | 0.841701269 | 1.054172993 | 1.044581652 |
| eddsa_pynacl.py | A2 | 0.1709795 | 0.306952238 | 0.383260012 | 0.49313736 | 0.590542078 | 0.680860281 | 0.77125597 | 0.872943163 | 1.047251701 | 1.026942253 |
| eddsa_25519.py | A3 | 8.248426199 | 17.19734383 | 25.07150364 | 33.08139396 | 44.34894276 | 48.30541992 | 56.03979969 | 67.77828288 | 75.28037786 | 80.32297444 |
| ecdsa_pyca.py | A4 | 3.542912006 | 7.184781075 | 11.16995263 | 14.25402331 | 18.22980762 | 22.95973539 | 26.84980297 | 28.28008723 | 31.97301388 | 34.76207709 |
| ecdsa_fast.py | A5 | 6.682162046 | 12.9932282 | 18.10763311 | 25.17496347 | 30.35726547 | 38.39182997 | 44.7647953 | 52.5189352 | 54.92479491 | 60.44519401 |
| Lamport.py | A6 | 8.104088306 | 11.96241832 | 18.78673029 | 23.26437402 | 30.72850919 | 37.29274035 | 47.14455986 | 51.52258611 | 52.4431653 | 57.12043858 |
| rsa_pyca.py | A7 | 167.9972985 | 295.0505171 | 468.2449756 | 604.3874695 | 756.3170781 | 919.4577258 | 1092.952193 | 1254.942085 | 1400.218388 | 1470.4019 |
| dsa_pyca.py | A8 | 175.2587302 | 357.5281057 | 562.2470579 | 770.0276287 | 973.0873778 | 1153.139525 | 1431.949466 | 1611.911932 | 1756.666671 | 1819.299451 |
| | | | | | | | | | | | |
| | Sign | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 |
| eddsa_libnacl.py | A1 | 0.15125227 | 0.246485949 | 0.364190102 | 0.446854115 | 0.559139729 | 0.616137743 | 0.727957726 | 0.767063618 | 0.918316126 | 0.933630228 |
| eddsa_pynacl.py | A2 | 0.167114019 | 0.303624868 | 0.376552105 | 0.476960897 | 0.59343791 | 0.673522949 | 0.761993647 | 0.846236706 | 0.983445883 | 1.028750181 |
| eddsa_25519.py | A3 | 8.332835913 | 17.3562026 | 25.3406148 | 33.39835858 | 44.27300787 | 48.65641117 | 56.42387342 | 68.38452959 | 75.8982625 | 80.75785232 |
| ecdsa_pyca.py | A4 | 3.434647083 | 6.951009989 | 10.72755408 | 13.79585552 | 17.79220295 | 22.29355311 | 25.93801761 | 27.43159056 | 31.09693837 | 33.8366406 |
| ecdsa_fast.py | A5 | 6.77016449 | 13.11141658 | 18.20898891 | 25.42832851 | 30.59282279 | 38.9105897 | 45.22158718 | 52.91061449 | 55.51046705 | 60.99478269 |
| Lamport.py | A6 | 0.514101505 | 0.79896903 | 1.265288591 | 1.508307457 | 2.009275913 | 2.511451006 | 3.083852768 | 3.383338928 | 3.465708971 | 3.800512552 |
| rsa_pyca.py | A7 | 4.69955039 | 8.232041359 | 13.41190934 | 17.3273654 | 21.56529045 | 26.28354788 | 31.19480062 | 35.64369679 | 40.26828957 | 41.18370724 |
| dsa_pyca.py | A8 | 0.663908005 | 1.365278482 | 2.102557898 | 2.855175734 | 3.614151478 | 4.281452656 | 5.367624283 | 6.055971146 | 6.61898303 | 6.777873993 |
| | | | | | | | | | | | |
| | Verify | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 |
| eddsa_libnacl.py | A1 | 0.278829575 | 0.466967583 | 0.706626892 | 0.874686003 | 1.077609301 | 1.224518538 | 1.432661772 | 1.506982565 | 1.893163919 | 1.917196751 |
| eddsa_pynacl.py | A2 | 0.363619566 | 0.623026848 | 0.767989635 | 0.980233431 | 1.215940714 | 1.391645432 | 1.560788631 | 1.791536331 | 2.029885769 | 2.110004663 |
| eddsa_25519.py | A3 | 27.64195919 | 58.02236676 | 84.4878509 | 111.564044 | 147.9148753 | 162.4192736 | 188.5399466 | 228.3188071 | 253.171926 | 270.0322185 |
| ecdsa_pyca.py | A4 | 2.522385597 | 5.074881554 | 7.814785242 | 10.11325312 | 12.87537742 | 16.28888202 | 18.99220824 | 20.03667331 | 22.73068213 | 24.73947859 |
| ecdsa_fast.py | A5 | 5.703709841 | 11.08345747 | 15.45728254 | 21.46638513 | 25.83404803 | 32.77934384 | 38.27114987 | 44.71440172 | 46.90944147 | 51.58055639 |
| Lamport.py | A6 | 0.000527382 | 0.000808954 | 0.001246929 | 0.001625061 | 0.002091646 | 0.002445459 | 0.003165007 | 0.003414392 | 0.003759623 | 0.003972054 |
| rsa_pyca.py | A7 | 0.344128847 | 0.611823559 | 0.955698013 | 1.234402657 | 1.561316252 | 1.891142845 | 2.212501049 | 2.641090393 | 2.920974731 | 3.000206232 |
| dsa_pyca.py | A8 | 0.44617939 | 0.935027838 | 1.405872107 | 1.934474945 | 2.485359192 | 2.880518198 | 3.565968513 | 4.042778254 | 4.472308397 | 4.632399559 |
| | | | | | | | | | | | |