

# VMmark® 3.1.1 Results

**Server Vendor & Model:** Inspur InMerge1100 (Inspur NF5280M6)  
**Storage Vendor & Model:** VMware vSAN 7.0 U3 - All Flash  
**Hypervisor:** VMware ESXi 7.0 U3d, Build 19482537  
**Datacenter Management Software:** VMware vCenter Server 7.0 U3d, Build 19480866

**VMmark 3.1.1 Score =  
25.25 @ 26 Tiles**

|  |  |   |
|--|--|---|
| Number of Hosts: 4                                 | Uniform Hosts [yes/no]: yes                            | Total sockets/cores/threads in test: 8/320/640      |
| Tested By: Inspur                                  |  | Test Date: 08-24-2022                               |
| Performance Section<br><a href="#">Performance</a> | Configuration Section<br><a href="#">Configuration</a> | Notes Section<br><a href="#">Notes for Workload</a> |

## Performance

|        | weathervane |       |                  | weathervaneE |       |                  | dvdstoreA |       |         | dvdstoreB |       |         | dvdstoreC |       |         |      |
|--------|-------------|-------|------------------|--------------|-------|------------------|-----------|-------|---------|-----------|-------|---------|-----------|-------|---------|------|
| TILE_0 | Actual      | Ratio | QoS(nRT MaxPctF) | Actual       | Ratio | QoS(nRT MaxPctF) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | GM   |
| p0     | 3578.97     | 0.99  | 0.55   0.00      | 560.82       | 0.98  | 0.47   0.31      | 933.05    | 1.27  | 798.45  | 659.67    | 1.32  | 911.94  | 454.48    | 1.31  | 1047.63 | 1.16 |
| p1     | 3562.95     | 0.99  | 0.57   0.00      | 559.35       | 0.98  | 0.52   0.23      | 939.33    | 1.28  | 780.07  | 685.25    | 1.37  | 891.54  | 507.62    | 1.46  | 991.26  | 1.20 |
| p2     | 3549.81     | 0.99  | 0.55   0.00      | 555.79       | 0.97  | 0.69   0.35      | 952.30    | 1.30  | 746.70  | 671.80    | 1.34  | 862.43  | 443.05    | 1.28  | 984.34  | 1.16 |
| TILE_1 | Actual      | Ratio | QoS(nRT MaxPctF) | Actual       | Ratio | QoS(nRT MaxPctF) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | GM   |
| p0     | 3582.64     | 1.00  | 0.51   0.00      | 570.94       | 1.00  | 0.65   0.35      | 992.55    | 1.35  | 651.94  | 730.88    | 1.46  | 741.20  | 525.62    | 1.52  | 809.48  | 1.24 |
| p1     | 3568.12     | 0.99  | 0.52   0.00      | 564.14       | 0.99  | 0.53   0.32      | 984.60    | 1.34  | 671.60  | 700.75    | 1.40  | 764.36  | 516.58    | 1.49  | 843.53  | 1.22 |
| p2     | 3559.58     | 0.99  | 0.53   0.00      | 560.88       | 0.98  | 0.61   0.29      | 994.95    | 1.35  | 642.49  | 706.80    | 1.41  | 747.81  | 496.82    | 1.43  | 823.93  | 1.22 |
| TILE_2 | Actual      | Ratio | QoS(nRT MaxPctF) | Actual       | Ratio | QoS(nRT MaxPctF) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | GM   |
| p0     | 3586.93     | 1.00  | 0.51   0.00      | 569.65       | 1.00  | 0.80   0.50      | 947.15    | 1.29  | 745.86  | 697.52    | 1.39  | 846.06  | 492.62    | 1.42  | 947.80  | 1.20 |
| p1     | 3566.53     | 0.99  | 0.46   0.00      | 564.97       | 0.99  | 0.58   0.29      | 967.55    | 1.32  | 716.65  | 678.80    | 1.36  | 836.42  | 497.85    | 1.44  | 925.76  | 1.20 |
| p2     | 3549.08     | 0.99  | 0.48   0.00      | 567.11       | 0.99  | 0.67   0.44      | 951.60    | 1.30  | 743.93  | 673.45    | 1.35  | 858.73  | 467.55    | 1.35  | 967.84  | 1.18 |
| TILE_3 | Actual      | Ratio | QoS(nRT MaxPctF) | Actual       | Ratio | QoS(nRT MaxPctF) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | GM   |
| p0     | 3574.47     | 0.99  | 0.53   0.00      | 567.80       | 0.99  | 0.64   0.45      | 948.77    | 1.29  | 769.12  | 717.45    | 1.43  | 884.85  | 505.48    | 1.46  | 1005.49 | 1.22 |
| p1     | 3559.57     | 0.99  | 0.51   0.00      | 564.77       | 0.99  | 0.65   0.49      | 951.45    | 1.30  | 765.51  | 645.55    | 1.29  | 894.17  | 463.50    | 1.34  | 1008.14 | 1.17 |
| p2     | 3552.76     | 0.99  | 0.50   0.00      | 565.49       | 0.99  | 0.52   0.32      | 950.38    | 1.29  | 765.55  | 693.92    | 1.39  | 889.76  | 487.52    | 1.41  | 1000.29 | 1.20 |
| TILE_4 | Actual      | Ratio | QoS(nRT MaxPctF) | Actual       | Ratio | QoS(nRT MaxPctF) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | GM   |
| p0     | 3567.71     | 0.99  | 0.66   0.00      | 569.28       | 0.99  | 1.06   0.85      | 924.55    | 1.26  | 798.28  | 678.20    | 1.36  | 903.79  | 501.82    | 1.45  | 999.36  | 1.19 |
| p1     | 3546.95     | 0.99  | 0.67   0.00      | 567.57       | 0.99  | 0.91   0.79      | 930.48    | 1.27  | 783.83  | 658.70    | 1.32  | 900.19  | 461.88    | 1.33  | 999.50  | 1.17 |
| p2     | 3535.74     | 0.98  | 0.69   0.00      | 561.84       | 0.98  | 0.65   0.52      | 921.73    | 1.26  | 805.47  | 681.92    | 1.36  | 905.70  | 481.05    | 1.39  | 1003.35 | 1.18 |
| TILE_5 | Actual      | Ratio | QoS(nRT MaxPctF) | Actual       | Ratio | QoS(nRT MaxPctF) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | Actual    | Ratio | QoS(ms) | GM   |
| p0     | 3578.80     | 0.99  | 0.55   0.00      | 559.71       | 0.98  | 0.43   0.29      | 949.95    | 1.29  | 732.87  | 700.05    | 1.40  | 833.99  | 500.38    | 1.44  | 907.90  | 1.20 |
| p1     | 3565.36     | 0.99  | 0.50   0.00      | 556.86       | 0.97  | 0.64   0.33      | 956.30    | 1.30  | 727.30  | 656.38    | 1.31  | 836.39  | 472.18    | 1.36  | 942.39  | 1.18 |

|                |         |       |                  |        |       |                  |        |       |         |        |       |         |        |       |         |      |
|----------------|---------|-------|------------------|--------|-------|------------------|--------|-------|---------|--------|-------|---------|--------|-------|---------|------|
| <b>p2</b>      | 3547.29 | 0.99  | 0.46   0.00      | 556.31 | 0.97  | 0.59   0.28      | 948.65 | 1.29  | 745.63  | 694.20 | 1.39  | 857.40  | 515.17 | 1.49  | 943.55  | 1.21 |
| <b>TILE_6</b>  | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3563.76 | 0.99  | 0.52   0.00      | 565.93 | 0.99  | 0.58   0.29      | 962.17 | 1.31  | 710.91  | 689.58 | 1.38  | 803.14  | 507.88 | 1.46  | 892.68  | 1.21 |
| <b>p1</b>      | 3549.31 | 0.99  | 0.52   0.00      | 567.05 | 0.99  | 0.52   0.29      | 963.52 | 1.31  | 708.13  | 691.73 | 1.38  | 802.84  | 483.90 | 1.40  | 885.66  | 1.20 |
| <b>p2</b>      | 3529.74 | 0.98  | 0.53   0.00      | 564.64 | 0.99  | 0.53   0.25      | 947.80 | 1.29  | 752.68  | 696.17 | 1.39  | 859.66  | 514.12 | 1.48  | 946.16  | 1.21 |
| <b>TILE_7</b>  | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3576.68 | 0.99  | 0.63   0.00      | 570.65 | 1.00  | 0.80   0.67      | 917.80 | 1.25  | 825.57  | 644.60 | 1.29  | 950.03  | 453.38 | 1.31  | 1047.30 | 1.16 |
| <b>p1</b>      | 3560.37 | 0.99  | 0.62   0.00      | 567.02 | 0.99  | 0.85   0.82      | 917.20 | 1.25  | 812.57  | 651.62 | 1.30  | 921.39  | 478.15 | 1.38  | 1020.82 | 1.17 |
| <b>p2</b>      | 3555.10 | 0.99  | 0.66   0.00      | 562.16 | 0.98  | 0.63   0.43      | 905.12 | 1.23  | 842.53  | 643.52 | 1.29  | 946.22  | 475.23 | 1.37  | 1041.85 | 1.16 |
| <b>TILE_8</b>  | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3573.16 | 0.99  | 0.76   0.00      | 569.63 | 1.00  | 0.91   0.66      | 924.77 | 1.26  | 820.42  | 652.02 | 1.30  | 947.64  | 448.25 | 1.29  | 1083.48 | 1.16 |
| <b>p1</b>      | 3556.08 | 0.99  | 0.73   0.00      | 564.16 | 0.99  | 0.57   0.34      | 928.05 | 1.26  | 806.26  | 682.73 | 1.36  | 908.30  | 480.95 | 1.39  | 1013.91 | 1.18 |
| <b>p2</b>      | 3544.72 | 0.99  | 0.73   0.00      | 561.61 | 0.98  | 0.60   0.31      | 935.85 | 1.27  | 783.83  | 662.75 | 1.32  | 900.07  | 484.48 | 1.40  | 994.20  | 1.18 |
| <b>TILE_9</b>  | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3579.49 | 0.99  | 0.50   0.00      | 572.70 | 1.00  | 0.91   0.63      | 989.58 | 1.35  | 655.12  | 709.08 | 1.42  | 741.49  | 477.27 | 1.38  | 825.53  | 1.21 |
| <b>p1</b>      | 3567.27 | 0.99  | 0.50   0.00      | 569.03 | 0.99  | 0.81   0.54      | 972.40 | 1.32  | 689.71  | 723.58 | 1.45  | 763.95  | 538.05 | 1.55  | 854.49  | 1.24 |
| <b>p2</b>      | 3558.18 | 0.99  | 0.47   0.00      | 565.03 | 0.99  | 0.42   0.19      | 982.30 | 1.34  | 670.41  | 679.62 | 1.36  | 759.35  | 498.60 | 1.44  | 837.05  | 1.21 |
| <b>TILE_10</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3579.85 | 0.99  | 0.46   0.00      | 564.02 | 0.99  | 0.49   0.32      | 975.20 | 1.33  | 696.20  | 691.70 | 1.38  | 797.67  | 489.38 | 1.41  | 874.20  | 1.20 |
| <b>p1</b>      | 3561.69 | 0.99  | 0.48   0.00      | 560.81 | 0.98  | 0.47   0.24      | 968.67 | 1.32  | 700.33  | 713.33 | 1.43  | 800.07  | 533.75 | 1.54  | 869.71  | 1.23 |
| <b>p2</b>      | 3557.89 | 0.99  | 0.49   0.00      | 556.79 | 0.97  | 0.55   0.27      | 964.08 | 1.31  | 723.52  | 682.15 | 1.36  | 835.40  | 478.85 | 1.38  | 920.62  | 1.19 |
| <b>TILE_11</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3591.44 | 1.00  | 0.47   0.00      | 565.27 | 0.99  | 0.43   0.24      | 937.48 | 1.28  | 779.19  | 666.15 | 1.33  | 894.76  | 462.52 | 1.33  | 1008.08 | 1.17 |
| <b>p1</b>      | 3566.16 | 0.99  | 0.48   0.00      | 561.77 | 0.98  | 0.72   0.42      | 929.77 | 1.27  | 793.32  | 680.55 | 1.36  | 908.02  | 504.25 | 1.45  | 995.29  | 1.19 |
| <b>p2</b>      | 3561.24 | 0.99  | 0.47   0.00      | 559.33 | 0.98  | 0.51   0.31      | 939.70 | 1.28  | 776.85  | 662.75 | 1.32  | 888.52  | 438.90 | 1.27  | 1010.20 | 1.16 |
| <b>TILE_12</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3571.84 | 0.99  | 0.53   0.00      | 568.87 | 0.99  | 0.88   0.76      | 937.58 | 1.28  | 777.20  | 688.83 | 1.38  | 880.95  | 482.62 | 1.39  | 988.15  | 1.19 |
| <b>p1</b>      | 3556.49 | 0.99  | 0.52   0.00      | 568.32 | 0.99  | 1.05   0.80      | 941.27 | 1.28  | 778.33  | 659.08 | 1.32  | 905.62  | 482.15 | 1.39  | 1006.80 | 1.18 |
| <b>p2</b>      | 3547.05 | 0.99  | 0.51   0.00      | 566.97 | 0.99  | 0.93   0.74      | 943.60 | 1.28  | 777.77  | 666.12 | 1.33  | 893.63  | 457.05 | 1.32  | 1026.90 | 1.17 |
| <b>TILE_13</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3557.53 | 0.99  | 0.40   0.00      | 563.79 | 0.99  | 0.57   0.28      | 987.67 | 1.35  | 676.93  | 725.52 | 1.45  | 779.16  | 508.45 | 1.47  | 884.00  | 1.23 |
| <b>p1</b>      | 3541.11 | 0.98  | 0.42   0.00      | 558.71 | 0.98  | 0.45   0.26      | 979.05 | 1.33  | 696.40  | 688.95 | 1.38  | 817.26  | 505.07 | 1.46  | 914.75  | 1.21 |
| <b>p2</b>      | 3527.13 | 0.98  | 0.41   0.00      | 556.94 | 0.97  | 0.58   0.33      | 979.38 | 1.33  | 699.13  | 694.45 | 1.39  | 798.77  | 482.95 | 1.39  | 914.60  | 1.20 |
| <b>TILE_14</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3580.63 | 1.00  | 0.46   0.00      | 568.82 | 0.99  | 1.06   0.94      | 970.12 | 1.32  | 708.52  | 711.52 | 1.42  | 812.18  | 523.00 | 1.51  | 910.56  | 1.23 |
| <b>p1</b>      | 3564.76 | 0.99  | 0.43   0.00      | 562.95 | 0.98  | 0.45   0.23      | 984.55 | 1.34  | 680.41  | 697.20 | 1.39  | 790.17  | 483.48 | 1.39  | 895.92  | 1.20 |
| <b>p2</b>      | 3557.36 | 0.99  | 0.48   0.00      | 561.43 | 0.98  | 0.65   0.43      | 960.92 | 1.31  | 739.17  | 705.20 | 1.41  | 844.96  | 493.20 | 1.42  | 954.51  | 1.21 |
| <b>TILE_15</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |

|                |         |       |                  |        |       |                  |        |       |         |        |       |         |        |       |         |      |
|----------------|---------|-------|------------------|--------|-------|------------------|--------|-------|---------|--------|-------|---------|--------|-------|---------|------|
| <b>p0</b>      | 3578.33 | 0.99  | 0.51   0.00      | 567.29 | 0.99  | 0.75   0.43      | 947.10 | 1.29  | 759.37  | 694.20 | 1.39  | 876.12  | 512.20 | 1.48  | 976.20  | 1.21 |
| <b>p1</b>      | 3559.19 | 0.99  | 0.50   0.00      | 558.84 | 0.98  | 0.57   0.26      | 956.17 | 1.30  | 745.73  | 675.05 | 1.35  | 866.22  | 467.12 | 1.35  | 988.86  | 1.18 |
| <b>p2</b>      | 3550.51 | 0.99  | 0.50   0.00      | 560.05 | 0.98  | 0.68   0.38      | 951.83 | 1.30  | 765.97  | 696.48 | 1.39  | 864.81  | 488.50 | 1.41  | 977.70  | 1.20 |
| <b>TILE_16</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3564.20 | 0.99  | 0.54   0.00      | 566.82 | 0.99  | 0.70   0.51      | 926.17 | 1.26  | 814.94  | 648.38 | 1.30  | 953.29  | 470.77 | 1.36  | 1066.41 | 1.17 |
| <b>p1</b>      | 3555.40 | 0.99  | 0.55   0.00      | 562.95 | 0.98  | 0.49   0.24      | 934.60 | 1.27  | 784.31  | 656.05 | 1.31  | 920.87  | 454.80 | 1.31  | 1048.16 | 1.16 |
| <b>p2</b>      | 3534.39 | 0.98  | 0.54   0.00      | 561.84 | 0.98  | 0.59   0.23      | 934.88 | 1.27  | 791.83  | 680.20 | 1.36  | 913.03  | 503.82 | 1.45  | 1005.51 | 1.19 |
| <b>TILE_17</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3578.90 | 0.99  | 0.47   0.00      | 569.22 | 0.99  | 0.98   0.80      | 974.85 | 1.33  | 681.15  | 696.65 | 1.39  | 774.32  | 512.20 | 1.48  | 857.28  | 1.22 |
| <b>p1</b>      | 3576.93 | 0.99  | 0.48   0.00      | 565.61 | 0.99  | 0.67   0.43      | 965.60 | 1.31  | 701.33  | 691.27 | 1.38  | 795.28  | 485.60 | 1.40  | 889.39  | 1.20 |
| <b>p2</b>      | 3554.18 | 0.99  | 0.50   0.00      | 559.66 | 0.98  | 0.46   0.25      | 966.98 | 1.32  | 699.63  | 712.75 | 1.42  | 791.31  | 534.10 | 1.54  | 861.64  | 1.23 |
| <b>TILE_18</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3576.49 | 0.99  | 0.50   0.00      | 563.86 | 0.99  | 0.75   0.46      | 916.92 | 1.25  | 829.44  | 620.58 | 1.24  | 969.10  | 444.27 | 1.28  | 1094.80 | 1.14 |
| <b>p1</b>      | 3558.18 | 0.99  | 0.49   0.00      | 557.56 | 0.97  | 0.49   0.27      | 916.20 | 1.25  | 822.21  | 673.55 | 1.35  | 934.74  | 473.30 | 1.36  | 1047.48 | 1.17 |
| <b>p2</b>      | 3543.03 | 0.98  | 0.53   0.00      | 556.60 | 0.97  | 0.63   0.29      | 923.90 | 1.26  | 798.15  | 650.90 | 1.30  | 929.13  | 476.93 | 1.38  | 1030.04 | 1.17 |
| <b>TILE_19</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3581.03 | 1.00  | 0.49   0.00      | 564.97 | 0.99  | 0.72   0.77      | 968.42 | 1.32  | 719.18  | 695.75 | 1.39  | 805.52  | 504.15 | 1.45  | 919.09  | 1.21 |
| <b>p1</b>      | 3567.71 | 0.99  | 0.47   0.00      | 561.62 | 0.98  | 0.66   0.45      | 951.50 | 1.30  | 749.65  | 707.88 | 1.41  | 837.42  | 500.73 | 1.44  | 938.07  | 1.21 |
| <b>p2</b>      | 3554.07 | 0.99  | 0.49   0.00      | 556.50 | 0.97  | 0.70   0.48      | 963.75 | 1.31  | 729.80  | 690.12 | 1.38  | 830.07  | 478.60 | 1.38  | 943.96  | 1.19 |
| <b>TILE_20</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3583.23 | 1.00  | 0.45   0.00      | 570.75 | 1.00  | 0.81   0.76      | 934.95 | 1.27  | 795.43  | 635.23 | 1.27  | 929.03  | 455.40 | 1.31  | 1049.06 | 1.16 |
| <b>p1</b>      | 3569.99 | 0.99  | 0.45   0.00      | 565.03 | 0.99  | 0.53   0.37      | 936.55 | 1.28  | 787.87  | 684.95 | 1.37  | 901.50  | 506.18 | 1.46  | 994.06  | 1.20 |
| <b>p2</b>      | 3553.26 | 0.99  | 0.52   0.05      | 565.88 | 0.99  | 0.72   0.48      | 953.67 | 1.30  | 753.52  | 667.35 | 1.33  | 881.97  | 465.07 | 1.34  | 986.59  | 1.18 |
| <b>TILE_21</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3578.17 | 0.99  | 0.41   0.00      | 563.63 | 0.99  | 0.61   0.34      | 990.98 | 1.35  | 662.72  | 699.38 | 1.40  | 770.79  | 493.57 | 1.42  | 859.84  | 1.21 |
| <b>p1</b>      | 3561.96 | 0.99  | 0.44   0.00      | 560.28 | 0.98  | 0.34   0.39      | 967.48 | 1.32  | 720.59  | 708.70 | 1.42  | 823.20  | 524.10 | 1.51  | 913.65  | 1.22 |
| <b>p2</b>      | 3551.82 | 0.99  | 0.44   0.00      | 557.76 | 0.97  | 0.56   0.27      | 980.25 | 1.33  | 694.07  | 686.85 | 1.37  | 822.08  | 480.90 | 1.39  | 914.64  | 1.20 |
| <b>TILE_22</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3578.75 | 0.99  | 0.42   0.00      | 568.78 | 0.99  | 0.95   0.80      | 946.65 | 1.29  | 747.02  | 695.25 | 1.39  | 858.40  | 489.62 | 1.41  | 970.25  | 1.20 |
| <b>p1</b>      | 3559.77 | 0.99  | 0.41   0.00      | 567.11 | 0.99  | 0.79   0.69      | 954.67 | 1.30  | 735.15  | 677.85 | 1.35  | 846.53  | 498.38 | 1.44  | 920.28  | 1.20 |
| <b>p2</b>      | 3540.88 | 0.98  | 0.46   0.00      | 560.84 | 0.98  | 0.51   0.42      | 946.65 | 1.29  | 758.86  | 670.08 | 1.34  | 880.87  | 464.77 | 1.34  | 986.66  | 1.17 |
| <b>TILE_23</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3581.73 | 1.00  | 0.45   0.00      | 573.13 | 1.00  | 0.85   0.90      | 949.92 | 1.29  | 764.79  | 690.00 | 1.38  | 885.67  | 486.15 | 1.40  | 999.53  | 1.20 |
| <b>p1</b>      | 3568.72 | 0.99  | 0.47   0.00      | 565.09 | 0.99  | 0.71   0.59      | 953.05 | 1.30  | 757.46  | 665.95 | 1.33  | 890.93  | 485.88 | 1.40  | 991.22  | 1.19 |
| <b>p2</b>      | 3551.79 | 0.99  | 0.46   0.00      | 561.48 | 0.98  | 0.35   0.25      | 950.55 | 1.29  | 764.35  | 668.62 | 1.34  | 893.55  | 463.93 | 1.34  | 1001.84 | 1.18 |
| <b>TILE_24</b> | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>      | 3578.10 | 0.99  | 0.68   0.00      | 565.93 | 0.99  | 0.58   0.27      | 931.35 | 1.27  | 791.40  | 686.12 | 1.37  | 886.52  | 502.68 | 1.45  | 1005.72 | 1.20 |

|  |         |       |                  |        |       |                  |                                 |          |          |        |       |                  |        |       |         |      |
|--|---------|-------|------------------|--------|-------|------------------|---------------------------------|----------|----------|--------|-------|------------------|--------|-------|---------|------|
| <b>p1</b>                                      | 3569.12 | 0.99  | 0.68   0.00      | 560.37 | 0.98  | 0.57   0.24      | 938.23                          | 1.28     | 783.80   | 634.65 | 1.27  | 917.95           | 457.55 | 1.32  | 1022.61 | 1.16 |
| <b>p2</b>                                      | 3553.03 | 0.99  | 0.66   0.00      | 559.55 | 0.98  | 0.75   0.41      | 933.20                          | 1.27     | 790.90   | 682.73 | 1.36  | 898.15           | 481.10 | 1.39  | 1010.93 | 1.18 |
| <b>TILE_25</b>                                 | Actual  | Ratio | QoS(nRT MaxPctF) | Actual | Ratio | QoS(nRT MaxPctF) | Actual                          | Ratio    | QoS(ms)  | Actual | Ratio | QoS(ms)          | Actual | Ratio | QoS(ms) | GM   |
| <b>p0</b>                                      | 3572.91 | 0.99  | 0.46   0.00      | 566.97 | 0.99  | 0.38   0.27      | 981.20                          | 1.34     | 669.81   | 725.60 | 1.45  | 760.82           | 539.25 | 1.55  | 840.29  | 1.24 |
| <b>p1</b>                                      | 3560.50 | 0.99  | 0.48   0.00      | 566.61 | 0.99  | 0.56   0.27      | 980.95                          | 1.34     | 669.51   | 697.45 | 1.39  | 762.32           | 490.80 | 1.42  | 864.32  | 1.21 |
| <b>p2</b>                                      | 3543.60 | 0.98  | 0.49   0.00      | 563.47 | 0.98  | 0.69   0.43      | 975.62                          | 1.33     | 677.57   | 723.77 | 1.45  | 762.46           | 514.55 | 1.48  | 850.45  | 1.23 |
| <b>p0_score:</b>                               | 31.17   |       |                  |        |       |                  |                                 |          |          |        |       |                  |        |       |         |      |
| <b>p1_score:</b>                               | 31.05   |       |                  |        |       |                  |                                 |          |          |        |       |                  |        |       |         |      |
| <b>p2_score:</b>                               | 30.93   |       |                  |        |       |                  |                                 |          |          |        |       |                  |        |       |         |      |
| <b>Infrastructure_Operations_Scores:</b>       |         |       |                  |        |       |                  | vMotion                         | SVMotion | XVMotion | Deploy |       |                  |        |       |         |      |
| <b>Completed_Ops_PerHour</b>                   |         |       |                  |        |       |                  | 54.00                           | 38.00    | 32.00    | 18.00  |       |                  |        |       |         |      |
| <b>Avg_Seconds_To_Complete</b>                 |         |       |                  |        |       |                  | 10.69                           | 150.76   | 175.28   | 342.48 |       |                  |        |       |         |      |
| <b>Failures</b>                                |         |       |                  |        |       |                  | 0.00                            | 0.00     | 0.00     | 0.00   |       |                  |        |       |         |      |
| <b>Ratio</b>                                   |         |       |                  |        |       |                  | 2.08                            | 2.11     | 1.78     | 2.25   |       |                  |        |       |         |      |
| <b>Number_Of_Threads</b>                       |         |       |                  |        |       |                  | 2                               | 2        | 2        | 2      |       |                  |        |       |         |      |
| <b>Summary</b>                                 |         |       |                  |        |       |                  | Run_Is_Compliant                |          |          |        |       | Turbo_Setting:0  |        |       |         |      |
|  |         |       |                  |        |       |                  | Number_Of_Compliance_Issues(0)* |          |          |        |       | Median_Phase(p1) |        |       |         |      |
| <b>Unreviewed_VMmark3_Applications_Score</b>   |         |       |                  |        |       |                  | 31.05                           |          |          |        |       |                  |        |       |         |      |
| <b>Unreviewed_VMmark3_Infrastructure_Score</b> |         |       |                  |        |       |                  | 2.05                            |          |          |        |       |                  |        |       |         |      |
| <b>Unreviewed_VMmark3_Score</b>                |         |       |                  |        |       |                  | 25.25                           |          |          |        |       |                  |        |       |         |      |

## Configuration

| Virtualization Software   |  |
|---|--|
| Hypervisor Vendor, Product, Version, and Build / Availability Date (MM-DD-YYYY)                     | VMware ESXi 7.0 U3d, Build 19482537 / 03-29-2022           |
| Datacenter Management Software Vendor, Product, Version, and Build / Availability Date (MM-DD-YYYY) | VMware vCenter Server 7.0 U3d, Build 19480866 / 03-29-2022 |
| Supplemental Software   | none   |
| Servers   |  |
| Number of Servers in System Under Test (all subsequent fields in this section are per server)       | 4  |
| Server Manufacturer and Model   | Inspur NF5280M6  |
| Processor Vendor and Model  | Intel Xeon Platinum 8380                                   |
| Processor Speed (GHz) / Turbo Boost Speed (GHz)   | 2.3 / 3.4  |
| Total Sockets/Total Cores/Total Threads   | 2 Sockets / 80 Cores / 160 Threads                         |

|  |   |
|--|---|
| Primary CPU Cache                              | 32KB I + 48 KB D on chip per core   |
| Secondary CPU Cache                            | 1280 KB I + D on chip per chip  |
| Other CPU Cache                                | 60 MB I + D on chip per chip  |
| BIOS Version                                   | 06.00.03(01/28/2022)  |
| Memory Size (in GB, Number of DIMMs)           | 1024,32   |
| Memory Type and Speed                          | 32GB 2Rx4 PC4-3200 MHz RDIMM  |
| Disk Subsystem Type                            | vSAN,iSCSI  |
| Number of Disk Controllers                     | 1   |
| Disk Controller Vendors and Models             | Intel Corporation Lewisburg SATA AHCI Controller  |
| Total Number of Physical Disks for Hypervisor  | 1   |
| Disk Vendors, Models, Capacities, and Speeds   | Intel,M.2 SATA SSD,480G,6Gbps   |
| Number of Host Bus Adapters                    | none  |
| Host Bus Adapter Vendors and Models            | none  |
| Number of Network Controllers                  | 4   |
| Network Controller Vendors and Models          | 1x I350 Gigabit Network Connection 1G 2-port<br>2x E810-XXVAM2 25G 2-port for SFP<br>1x E810-XXV 25G 2-port for SFP   |
| Other Hardware                                 | none  |
| Other Software                                 | none  |
| Hardware Availability Date (MM-DD-YYYY)        | 04-01-2022  |
| BIOS Availability Date (MM-DD-YYYY)            | 01-28-2022  |
| Software Availability Date (MM-DD-YYYY)        | 03-29-2022  |
| <b>Network</b>                                 |   |
| Network Switch Vendors and Models              | Ruijie RG-S5510-24GT/8SFP-E<br>Mellanox SN2410 48P 25GbE & 8P 100GbE  |
| Network Speed                                  | 1 Gb/s for management<br>SUT host: 1x 25Gb/s for vMotion<br>1x 25Gb/s for vSAN<br>2x 25Gb/s for VMs<br>1x 25Gb/s for iSCSI<br>Client host: 1x 25Gb/s for VMs      |
| <b>Primary Storage</b>                         |   |
| Storage Category                               | VMware vSAN   |
| Storage Vendors, Models, and Firmware Versions | 4 x Inspur NF5280M6 servers in a VMware vSAN 7.0 U3 cluster   |
| Storage Configuration Summary                  | VMware vSAN<br>2 x Disk Groups per host<br>1 x Intel P4510 4T U.2 SSD for vSAN cache per Disk Group<br>2 x Intel P4510 4T U.2 SSD for vSAN storage per Disk Group |
| <b>Datacenter Management Server</b>            |   |
| System Model                                   | Inspur NF5280M6   |

|  |  |
|--|--|
| Processor Vendor and Model   | Intel Xeon Platinum 8380   |
| Processor Speed (GHz)  | 2.3  |
| Total Sockets/Total Cores/Total Threads                                | 2 Sockets / 80 Cores / 160 Threads   |
| Memory Size (in GB, Number of DIMMs)                                   | 1024,32  |
| Network Controller(s) Vendors and Models                               | 1x I350 Gigabit Network Connection 1G 2-port<br>1x E810-XXV 25G 2-port for SFP |
| Operating System, Version, Bitness, and Service Pack                   | VMware ESXi 7.0 U3c, Build 19193900  |
| Virtual Center VM Number of vCPUs                                      | 4  |
| Virtual Center VM Virtual Memory (in GB)                               | 19   |
| Virtual Center VM Operating System, Version, Bitness, and Service Pack | VMware vCenter Server 7.0 U3d, Build 19480866                                  |
| Other Hardware   | none   |
| Other Software   | none   |

#### Clients

|  |  |
|--|--|
| Total Number of Virtual Clients / Virtual Client Hosts | 27 / 3   |
| System Model(s)  | host1:Inspur NF5280M6<br>host2:Inspur NF5280M6<br>host3:Inspur NF8480M6  |
| Processor Vendor(s) and Model(s)                       | host1:Intel Xeon Platinum 8380<br>host2:Intel Xeon Platinum 8358<br>host3:Intel Xeon Gold 6348H  |
| Processor Speed(s) (GHz)                               | host1: 2.3 GHz<br>host2: 2.6 GHz<br>host3: 2.3 GHz   |
| Total Sockets/Total Cores/Total Threads                | host1: 2 Sockets / 80 Cores / 160 Threads<br>host2: 2 Sockets / 64 Cores / 128 Threads<br>host3: 4 Sockets / 96 Cores / 192 Threads  |
| Memory per Virtual Client Host                         | host1: 1TB<br>host2: 896GB<br>host3: 3TB   |
| Network Controller(s) Vendors and Models               | host1: 1x I350 1G for management 1x E810-XXV 25G for Client<br>host2: 1x Intel 82599 run at 1G for management 1x E810-XXV 25G for Client<br>host3: 1x I350 1G for management 1x E810-XXV 25G for Client  |
| Virtual Client Networking Notes                        | host1:vSwitch0 on vmnic0 for management (1G),vSwitch1 on vmnic2 for VMs (25G)<br>host2:vSwitch0 on vmnic0 for management (1G),vSwitch1 on vmnic3 for VMs (25G)<br>host3:vSwitch0 on vmnic0 for management (1G),vSwitch1 on vmnic14 for VMs (25G) |
| Virtual Client Storage Notes                           | host1:1 x P4510 4T for Client,1 x Intel M.2 SATA SSD 480G for OS<br>host2:1 x P4510 1.6T for Client,1x P4510 1.6T for OS<br>host3:1 x P4510 4T for Client,1 x P4510 4T for OS  |
| Other Hardware   | none   |
| Other Software   | host1&host2:VMware ESXi 7.0 U3d, Build 19482537<br>host3:VMware ESXi 7.0 U3c, Build 19193900   |

#### Security Mitigations

| Vulnerability | CVE       | Exploit Name | Public Vulnerability Name | Mitigated       |      |          |
|---------------|-----------|--------------|---------------------------|-----------------|------|----------|
|               |           |              |                           | Server Firmware | ESXi | Guest OS |
| Spectre       | 2017-5753 | Variant 1    | Bounds Check Bypass       | N/A             | Yes  | Yes      |

|               |           |            |                            |     |     |     |
|---------------|-----------|------------|----------------------------|-----|-----|-----|
| Spectre       | 2017-5715 | Variant 2  | Branch Target Injection    | Yes | Yes | Yes |
| Meltdown      | 2017-5754 | Variant 3  | Rogue Data Cache Load      | N/A | Yes | Yes |
| Spectre-NG    | 2018-3640 | Variant 3a | Rogue System Register Read | Yes | N/A | N/A |
| Spectre-NG    | 2018-3639 | Variant 4  | Speculative Store Bypass   | N/A | Yes | Yes |
| Foreshadow    | 2018-3615 | Variant 5  | L1 Terminal Fault - SGX    | N/A | N/A | N/A |
| Foreshadow-NG | 2018-3620 | Variant 5  | L1 Terminal Fault - OS     | N/A | N/A | Yes |
| Foreshadow-NG | 2018-3646 | Variant 5  | L1 Terminal Fault - VMM    | N/A | Yes | N/A |

## Notes for Workload

Template deployed with disk type: Thin

### Virtualization Software Notes

-Logical CPU configuration changed for all multi-CPU VMs to 1 socket with multiple cores (default single core per socket)

-Memory shares set to high for all DS3DB,ElasticDB,Client (default normal)

-CPU shares set to high for all DS3DB,Client and all Elastic VMs (default normal)

-CDROM removed from all VMs except for Elastic, PrimeClient, and template VMs.

-All memory reserved for DS3DB,ElasticDB (default non-reserved)

-sched.mem.pin was set to "TRUE" for DS3DB,ElasticDB VMs

-CPU shares set to low for all Standby VMs (default normal)

-vSphere DRS Migration Threshold set to Fully Automated level 1

### Advanced settings:

-Cpu.CreditAgePeriod = 1000 (default 3000)

-Cpu.HTWholeCoreThreshold = 0 (default 800)

-DataMover.HardwareAcceleratedInit = 0 (default 1)

-DataMover.HardwareAcceleratedMove = 0 (default 1)

-Disk.IdleCredit = 64 (default 32)

-Disk.ReqCallThreshold = 1 (default 8)

-Mem.CtlMaxPercent = 0 (default 65)

-Mem.ShareScanGHz = 0 (default 4)

-Net.MaxNetifTxQueueLen = 1000 (default 2000)

-Net.MaxPortRxQueueLen = 160 (default 80)

-Numa.LTermFairnessInterval = 0 (default 5)

-Numa.MigImbalanceThreshold = 57 (default 10)

-Numa.PageMigEnable = 0 (default 1)

-Numa.RebalancePeriod = 6000 (default 2000)

-Numa.SwapLoadEnable = 0 (default 1)

-Numa.SwapLocalityEnable = 0 (default 1)

-Power.CpuPolicy = High Performance (default Balanced)

-VMFS3.HardwareAcceleratedLocking = 0 (default 1)

-VMkernel.Boot.hyperthreadingMitigation = true (default false)

-UserVars.HostClientCEIPOptIn= 2(default 0)

-UserVars.SuppressShellWarning = 1 (default 0)

## **Server Notes**

-Sub Numa Clustering set to Disabled (default : Enabled)

-DCU Stream Prefetcher set to Disabled (default : Enabled)

-DCU IP Prefetcher set to Disabled (default : Enabled)

-LLC Prefetch set to Enabled (default : Disabled)

-LLC Dead Line Allocation set to Disabled (default : Enabled)

-Stale A to S set to Enabled (default : Disabled)

## **Networking Notes**

-vSwitch0 for Service Console on vmnic0 at 1Gbps

vmk0 connected with vSwitch0 for management

-vSwitch1 for Auction, DS3, Standby, DeployVM,ElasticLB, VMs on vmnic2 at 25Gbps

MTU 9000 (default 1500)

-vSwitch2 for all Elastic except ElasticLB VMs on vmnic6 at 25Gbps

MTU 9000 (default 1500)

-Distributed Virtual Switch DSwitch1 for vMotion on vmnic5 at 25Gbps

vmk1 connected with DSwitch1 for vMotion

MTU 9000 (default 1500)

-Distributed Virtual Switch DSwitch for vSAN on vmnic4 at 25Gbps

vmk2 connected with DSwitch

MTU 9000 (default 1500)



-iscsi Virtual Switch for iSCSI on vmnic3 at 25Gbps

vmk3 connected with iscsi

## **Storage Notes**

VMware vSAN 7.0 U3

-Capacity: 58.22TB

-Cache: 11.64TB

-Hardware Configuration:

Each host had 2 disk group

each group has 1 x P4510 4TB for cache and 2 x P4510 4TB for storage

iSCSI

-hardware:Inspur NF5280M6

-OS:Windows Server Datacenter 2019

-Network: 1 x E810-XXV 25G

LUN1: 4 x P4510 4T RAID 5

LUN2: 4 x P4510 4T RAID 5

## **Datacenter Management Server Notes**

none

## **Operating System Notes**

none

Software Notes

none

## **Client Notes**

-Client-host1: Client15,Client16,Client17,Client18,Client19,Client20,Client21,Client22,Client23,Client25,PrimeClient,VMware vCenter Server

-Client-host2: Client9,Client10,Client11,Client12,Client13,Client14

-Client-host3: Client0,Client1,Client2,Client3,Client4,Client5,Client6,Client7,Client8,Client24,ntp

Advanced Settings:

-Power.CpuPolicy = High Performance (default Balanced)

-UserVars.HostClientCEIPOptIn = 2 (default 0)

-UserVars.SuppressShellWarning = 1 (default 0)

#### Server notes:

- Sub Numa Clustering set to Disabled (default : Enabled)
- DCU Stream Prefetcher set to Disabled (default : Enabled)
- DCU IP Prefetcher set to Disabled (default : Enabled)
- LLC Prefetch set to Enabled (default : Disabled)
- LLC Dead Line Allocation set to Disabled (default : Enabled)
- Stale A to S set to Enabled (default : Disabled)

#### Networking notes:

- Client-host1:vSwitch0 on vmnic0 connected with vmk0 for management at 1Gbps  
vSwitch1 on vmnic2 for VMs at 25Gbps MTU 9000 (default 1500)
- Client-host2: vSwitch0 on vmnic0 connected with vmk0 for management at 1Gbps  
vSwitch1 on vmnic3 for VMs at 25Gbps MTU 9000 (default 1500)
- Client-host3: vSwitch0 on vmnic0 connected with vmk0 for management at 1Gbps  
vSwitch1 on vmnic14 for VMs at 25Gbps MTU 9000 (default 1500)

#### Storage notes:

- Client-host1: 1 x P4510 4T for Client , 1 x Intel M.2 SATA SSD 480G for OS
- Client-host2: 1 x P4510 1.6T for Client, 1 x P4510 1.6T for OS
- Client-host3: 1 x P4510 4T for Client, 1 x P4510 4T for OS

### Other Notes

#### Changes to VMmark3.properties file:

- TileDelay = 30 (default 60)

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This is a full disclosure report for a VMmark benchmark result. All published VMmark results must be from fully-compliant tests for which a full disclosure report is publicly available.

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