| lote | | | | | | | | | | | | | | |
|--|--|--|--|--|---|--|-------------------------------------|----------------------------------|--|---|-----------------|-----------------|-----------------|--------|
| his case is used as an exan | nple for the Interfaces pa | ige. | | | | | | | | | | | | |
| CPU speed and network spe | ed of muti-site are equal | to the minimum v | alues in all sites. | | | | | | | | | | | |
| Hour (x, y) x, y is CPU availa | ble, Memory available a | that time. | | | | | | | | | | | | |
| Zone shows the location of e | ach site that is the same | or not. | | | | | | | | | | | | |
| Name of site, CPU, and Mem | nory A self-defined exam | ple. | | | | | | | | | | | | |
| If the search returns the leas | • | | is equal to 2 The | search will stop i | nmediately, sear | ch for sites 3 and 4 | 4) | | | | | | | |
| | | | | | , | | <u></u> | | | | | | | |
| Name | CPU capacity | Memory capacit | Additional Net | Image Type | CPU Speed (GH | Net Speed(Mbps | Zone | Hour 1 (8:00-9 | :0 Hour 2 (9:00-10 | Hour 3 (10:00-11 | Hour 4 (11:00-1 | Hour 5 (12:00-1 | Hour 6 (13:00-1 | 14:00) |
| CU | 20 | | ENT/IPOP | CENOS/ROCK | 2.8 | 600 | Asia | · · · | 10,20 | 20,40 | 20,40 | 20,40 | 20,40 | 7 |
| KU | 16 | | none | CENOS/ROCK | 2.3 | | Asia | · · | 16.32 | 16.32 | 16.32 | 6,10 | 6.10 | |
| SWU | 6 | | none | CENOS | 2.4 | 90 | | | 2,2 | 6,12 | 6,12 | 6,12 | 6,12 | |
| TU | 4 | | ENT | CENOS/ROCK | 2.8 | 1000 | Asia | | 4,16 | 2,2 | 2,2 | 4,16 | 2,8 | |
| UCSD | 128 | | ENT/IPOP | ROCK | 3.5 | 10000 | Amarican | · · | 128,512 | 128,512 | 20,40 | 20,40 | 20,40 | |
| UF | 128 | | IPOP | CENOS/ROCK | 3.5 | 10000 | Amarican | | 128,256 | 128,256 | 28,56 | 28,56 | 128,256 | + |
| JI | 120 | 250 | II OF | CLIVOS/ROCK | 3.3 | 10000 | Amancan | *available cpu,r | | 120,230 | 20,30 | 20,30 | 120,230 | |
| | | | | | | | | avaliable cpu, | полюту | | | | | |
| Case 1 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Search for: | Mana 10 Addition - 111-1 | -None Imag: Di | OCK Time h = =!= | -0.00 Time s = 1 | 10.00 Duratica 5 | nom bosin to | | | | | | | | |
| No. of sites = Any, CPU=20, | ivieiri=40, Additional Net | -ivone, image=RC | Jok, Time begin | -o.uu, rime end= | 10.00, Duration=F | rom begin to end | | | | | | | | |
| Flow: | A data and New Alexandr | | K - OU KU TU | HE HOOD | | | | | | | | | | |
| 1) Check for sites that match | | - | | , UF,UCSD | | | | | | | | | | |
| 2) Start with 2 sites: resource | | | | | | | | | | | | | | |
| 2.1) Check for sites that has | . , | | | | | | | | | | | | | |
| 2.2) For each site, check ava | | | | • | d Hour2) -> CU, F | KU, UCSD,UF | | | | | | | | |
| 2.3) Create combination as re | esults> CU+KU,CU+U | CSD, CU+UF, KU | ı+UCSD,KU+UF,I | JCSD+UF | | | | | | | | | | |
| Results: | | | | | | | | | | | | | | |
| Sites | | Total CPU Avail | | | • | Network Speed | | | Time Begin | Time End | | | | |
| CU(4)+KU(1) | | 26/36 | | 52/72 | 2.3 | | none | ROCK | 8:00 | | | | | |
| CU(4)+UCSD(2) | 10:10 | 38/148 | 20:20 | 132/552 | 2.8 | | ENT/IPOP | ROCK | 8:00 | | | | | |
| CU(4)+UF(2) | 10:10 | 138/148 | 20:20 | 276/296 | 2.8 | 600 | IPOP | ROCK | 8:00 | 10:00 | | | | |
| KU(1)+UCSD(2) | | | | | | | | | | | | | | |
| ZL1/4\ . LTE/2\ | 10:10 | 46/144 | 20:20 | 144/544 | 2.3 | 1000 | none | ROCK | 8:00 | 10:00 | | | | |
| (U(1)+UF(2) | | 46/144 144/144 | | 144/544 288/288 | 2.3 | 1000 | | ROCK ROCK | 8:00 8:00 | | | | | |
| | 10:10 | | 20:20 | | | 1000 | none | | | 10:00 | | | | |
| UCSD(2)+UF(2) | 10:10 | 144/144 | 20:20 | 288/288 | 2.3 | 1000 | none | ROCK | 8:00 | 10:00 | | | | |
| JCSD(2)+UF(2) Flow: | 10:10 10:10 | 144/144 156/256 | 20:20 20:20 | 288/288 156/768 | 2.3 | 1000 | none | ROCK | 8:00 | 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match | 10:10 10:10 Additional Net = None a | 144/144 156/256 and Image = ROCk | 20:20 20:20 K> CU, UCSD, | 288/288 156/768 | 2.3 | 1000 | none | ROCK | 8:00 | 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource | 10:10 10:10 Additional Net = None a e demand CPU=10, Mem | 144/144 156/256 and Image = ROCk n=20 on each site | 20:20 20:20 K> CU, UCSD, | 288/288 156/768 | 2.3 | 1000 | none | ROCK | 8:00 | 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has | 10:10 10:10 Additional Net = None as demand CPU=10, Mem capacity for the resource | 144/144 156/256 and Image = ROCk n=20 on each site e demand> CU, i | 20:20 20:20 K> CU, UCSD, UCSD, UF | 288/288 156/768 UF | 2.3 | 1000 | none | ROCK | 8:00 | 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has 2.2) For each site, check ava | 10:10 10:10 Additional Net = None as demand CPU=10, Mem capacity for the resource illable cpu,memory > der | 144/144 156/256 and Image = ROCk n=20 on each site e demand> CU, mand during the tir | 20:20 20:20 K> CU, UCSD, UCSD, UF | 288/288 156/768 UF | 2.3 | 1000 | none | ROCK | 8:00 | 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has 2.2) For each site, check ava 2.3) Create combination as re | 10:10 10:10 Additional Net = None as demand CPU=10, Mem capacity for the resource illable cpu,memory > der | 144/144 156/256 and Image = ROCk n=20 on each site e demand> CU, mand during the tir | 20:20 20:20 K> CU, UCSD, UCSD, UF | 288/288 156/768 UF | 2.3 | 1000 | none | ROCK | 8:00 | 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has 2.2) For each site, check ava 2.3) Create combination as re Results: | 10:10 10:10 Additional Net = None as demand CPU=10, Men capacity for the resource illable cpu,memory > deresults> CU+UCSD,CU | 144/144 156/256 and Image = ROCk n=20 on each site e demand> CU, mand during the tir | 20:20 20:20 K> CU, UCSD, UCSD, UF me specified by the | 288/288 156/768 UF | 2.3 3.5 d Hour2) -> CU,U | 1000 | none IPOP | ROCK ROCK | 8:00 | 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has 2.2) For each site, check ava 2.3) Create combination as re Results: Sites | 10:10 10:10 Additional Net = None at demand CPU=10, Men capacity for the resource illable cpu,memory > deresults> CU+UCSD,CU | 144/144 156/256 and Image = ROCk n=20 on each site e demand> CU, mand during the tir U+UF,UCSD+UF | 20:20 20:20 K> CU, UCSD, UCSD, UF me specified by the | 288/288 156/768 UF ne user (Hour1 ar | 2.3 3.5 d Hour2) -> CU,U | 1000 10000 CSD,UF | none IPOP | ROCK ROCK | 8:00 8:00 | 10:00 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has 2.2) For each site, check ava 2.3) Create combination as re Results: Sites CU(4)+UCSD(2) | Additional Net = None as demand CPU=10, Men capacity for the resource illable cpu,memory > deresults> CU+UCSD,CU | 144/144 156/256 and Image = ROCk n=20 on each site e demand> CU, mand during the tir I+UF,UCSD+UF | 20:20 20:20 K> CU, UCSD, UCSD, UF me specified by the Mem Needed 20:20 | 288/288 156/768 UF ne user (Hour1 ar | 2.3 3.5 d Hour2) -> CU,U | 1000 10000 CSD,UF Network Speed 600 | none IPOP Additional Net | ROCK ROCK | 8:00 8:00 | 10:00 10:00 | | | | |
| KU(1)+UF(2) UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has 2.2) For each site, check ava 2.3) Create combination as re Results: Sites CU(4)+UCSD(2) CU(4)+UF(2) UCSD(2)+UF(2) | 10:10 10:10 Additional Net = None at demand CPU=10, Men capacity for the resource illable cpu,memory > deresults> CU+UCSD,CU CPU Needed 10:10 10:10 | 144/144 156/256 and Image = ROCk n=20 on each site demand> CU, mand during the tir I+UF,UCSD+UF Total CPU Avail 38/148 | 20:20 20:20 K> CU, UCSD, UCSD, UF me specified by th Mem Needed 20:20 20:20 | 288/288 156/768 UF ne user (Hour1 ar Total Mem Avail 142/552 | 2.3 3.5 d Hour2) -> CU,U CPU Speed 2.8 | 1000 10000 CSD,UF Network Speed 600 600 | none IPOP Additional Net IPOP IPOP | ROCK ROCK Image Types ROCK | 8:00 8:00 Time Begin 8:00 | 10:00 10:00 <i>Time End</i> 10:00 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has 2.2) For each site, check ava 2.3) Create combination as re Results: Sites CU(4)+UCSD(2) CU(4)+UF(2) | 10:10 10:10 Additional Net = None at demand CPU=10, Men capacity for the resource illable cpu,memory > deresults> CU+UCSD,CU CPU Needed 10:10 10:10 | 144/144 156/256 and Image = ROCk n=20 on each site demand> CU, mand during the tir I+UF,UCSD+UF Total CPU Avail. 38/148 138/148 | 20:20 20:20 K> CU, UCSD, UCSD, UF me specified by th Mem Needed 20:20 20:20 | 288/288 156/768 UF ne user (Hour1 ar Total Mem Avail 142/552 286/296 | 2.3 3.5 d Hour2) -> CU,U CPU Speed 2.8 2.8 | 1000 10000 CSD,UF Network Speed 600 600 | none IPOP Additional Net IPOP IPOP | ROCK ROCK Image Types ROCK ROCK | 8:00 8:00 Time Begin 8:00 8:00 | 10:00 10:00 <i>Time End</i> 10:00 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has 2.2) For each site, check ava 2.3) Create combination as re Results: Sites CU(4)+UCSD(2) | 10:10 10:10 Additional Net = None at demand CPU=10, Men capacity for the resource illable cpu,memory > deresults> CU+UCSD,CU CPU Needed 10:10 10:10 | 144/144 156/256 and Image = ROCk n=20 on each site demand> CU, mand during the tir I+UF,UCSD+UF Total CPU Avail. 38/148 138/148 | 20:20 20:20 K> CU, UCSD, UCSD, UF me specified by th Mem Needed 20:20 20:20 | 288/288 156/768 UF ne user (Hour1 ar Total Mem Avail 142/552 286/296 | 2.3 3.5 d Hour2) -> CU,U CPU Speed 2.8 2.8 | 1000 10000 CSD,UF Network Speed 600 600 | none IPOP Additional Net IPOP IPOP | ROCK ROCK Image Types ROCK ROCK | 8:00 8:00 Time Begin 8:00 8:00 | 10:00 10:00 <i>Time End</i> 10:00 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has 2.2) For each site, check ava 2.3) Create combination as re Results: Sites CU(4)+UCSD(2) CU(4)+UF(2) | 10:10 10:10 Additional Net = None at demand CPU=10, Men capacity for the resource illable cpu,memory > deresults> CU+UCSD,CU CPU Needed 10:10 10:10 | 144/144 156/256 and Image = ROCk n=20 on each site demand> CU, mand during the tir I+UF,UCSD+UF Total CPU Avail. 38/148 138/148 | 20:20 20:20 K> CU, UCSD, UCSD, UF me specified by th Mem Needed 20:20 20:20 | 288/288 156/768 UF ne user (Hour1 ar Total Mem Avail 142/552 286/296 | 2.3 3.5 d Hour2) -> CU,U CPU Speed 2.8 2.8 | 1000 10000 CSD,UF Network Speed 600 600 | none IPOP Additional Net IPOP IPOP | ROCK ROCK Image Types ROCK ROCK | 8:00 8:00 Time Begin 8:00 8:00 | 10:00 10:00 <i>Time End</i> 10:00 10:00 | | | | |
| UCSD(2)+UF(2) Flow: 1) Check for sites that match 2) Start with 2 sites: resource 2.1) Check for sites that has 2.2) For each site, check ava 2.3) Create combination as re Results: Sites CU(4)+UCSD(2) CU(4)+UF(2) | 10:10 10:10 Additional Net = None at demand CPU=10, Men capacity for the resource illable cpu,memory > deresults> CU+UCSD,CU CPU Needed 10:10 10:10 | 144/144 156/256 and Image = ROCk n=20 on each site demand> CU, mand during the tir I+UF,UCSD+UF Total CPU Avail. 38/148 138/148 | 20:20 20:20 K> CU, UCSD, UCSD, UF me specified by th Mem Needed 20:20 20:20 | 288/288 156/768 UF ne user (Hour1 ar Total Mem Avail 142/552 286/296 | 2.3 3.5 d Hour2) -> CU,U CPU Speed 2.8 2.8 | 1000 10000 CSD,UF Network Speed 600 600 | none IPOP Additional Net IPOP IPOP | ROCK ROCK Image Types ROCK ROCK | 8:00 8:00 Time Begin 8:00 8:00 | 10:00 10:00 <i>Time End</i> 10:00 10:00 | | | | |

| Case 3 | | | | | | | | | | | | |
|--|---------------------|---------------------------------------|---------------------|-------------------|-------------------|-------------------|----------------|-------------|------------|----------|--|--|
| Search for: | | | | | | | | | | | | |
| No. of sites = Any, CPU=20, Mem= | =40, Additional Ne | et=None, Image=R | ROCK, Time begin | =8:00, Time end= | 12:00, Duration= | 2 hours | | | | | | |
| Flow: | | | | | | | | | | | | |
| 1) Check for sites that match Addit | ional Net = None | and Image = ROC | CK> CU, KU, TL | I, UF | | | | | | | | |
| 2) Start with 2 sites: resource dem | and CPU=10, Mer | m=20 on each site | | | | | | | | | | |
| 2.1) Check for sites that has capac | ity for the resourc | e demand> CU | , KU, UF | | | | | | | | | |
| 2.2) For each site, check available | cpu,memory > de | emand during the t | time specified by t | he user (Hour1 an | nd Hour2) -> CU, | KU, UF | | | | | | |
| 2.3) Create combination as results | > CU+KU, CU+ | UF, KU+UF | | | | | | | | | | |
| Results: | | | | | | | | | | | | |
| Sites | CPU Needed | Total CPU Avail | ./ Mem Needed | Total Mem Avail. | CPU Speed | Network Speed | Additional Net | Image Types | Time Begin | Time End | | |
| CU(4)+KU(1) | 10:10 | 26/36 | 20:20 | 52/72 | 2.3 | 600 | none | ROCK | 8:00 | 10:00 | | |
| CU(4)+UF(2) | 10:10 | 138/148 | 20:20 | 286/296 | 2.8 | 600 | IPOP | ROCK | 8:00 | 10:00 | | |
| KU(1)+UF(2) | 10:10 | 144/144 | 20:20 | 288/288 | 2.3 | 1000 | none | ROCK | 8:00 | 10:00 | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Case 4 | | | | | | | | | | | | |
| Search for: | | | | | | | | | | | | |
| No. of sites = Any, CPU=60, Mem= | =60. Additional Ne | et=None. Image=R | ROCK. Time begin | =11:00. Time end | =13:00. Duration: | =From begin to en | d | | | | | |
| Flow: | | l l l l l l l l l l l l l l l l l l l | | | | | | | | | | |
| Check for sites that match Addit | ional Net = None : | and Image = ROC | CK> CII KII TI | LUEUCSD | | | | | | | | |
| Start with 2 sites: resource dem | | - | | , 61 ,6665 | | | | | | | | |
| 2.1) Check for sites that has capac | | | • | | | | | | | | | |
| 2.2) But in 2.1 no pair have enough | • | e demand | | | | | | | | | | |
| 3) turn to start with 3 site resource | | 0 Mam = 20 an ac | ach aita | | | | | | | | | |
| 3.1) Check for sites that has capac | | | | | | | | | | | | |
| 3.1) Create combination as results | • | | UCSD,UF | | | | | | | | | |
| | > CU+UCSD+U |)F | | | | | | | | | | |
| Results: | | | | | | | | | | | | |
| Sites | CPU Needed | | | Total Mem Avai | | Network Speed | | | Time Begin | Time End | | |
| CU(4)+UCSD(2)+UF(2) | 20:20:20 | 0 68/276 | 20:20:20 | 136/808 | 2.8 | 3 600 | IPOP | ROCK | 11:00 | 13:00 | | |
| Case 5 | | | | | | | | | | | | |
| Search for: | | | | | | | | | | | | |
| No. of sites = 4, CPU=60, Mem=60 |), Additional Net=1 | None, Image=RO | CK, Time begin=8 | :00, Time end=12 | :00, Duration=2 h | nours | | | | | | |
| Flow: | | | | | | | | | | | | |
| Check for sites that match Addit | ional Net = None : | and Image = ROO | CK> CU. KU. TL | I, UF,UCSD | | | | | | | | |
| 2)start with 3 site resource demand | | | | , - , | | | | | | | | |
| 2.1) Check for sites that has capac | | | | | | | | | | | | |
| 2.2) Create combination as results | | | | | | | | | | | | |
| Results: | 30.110.000 | .2 31 (11110010,4 | , | | | | | | | | | |
| Sites | CPU Needed | Total CPU Avai | il Mem Needed | Total Mem Avai | CPII Speed | Network Speed | Additional Net | Image Types | Time Begin | Time End | | |
| CU(4)+KU(1)+UCSD(2)+UF(2) | 15:15:15:15 | 84/292 | 15:15:15:15 | 168/840 | 2.3 | · · | IPOP | ROCK | 10:00 | | | |
| CO(+)+NO(1)+OCOD(2)+OF(2) | 15.15.15.15 | 04/282 | 15.15.15.15 | 100/040 | 2.3 | 5 600 | IF OF | NOCK | 10.00 | 12.00 | | |
| Case 6 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Search for: No. of sites = 2, CPU=60, Mem=60 | Additional Nat-N | None Image=PO | CK Time booin=4 | 1:00 Time and=1 | 4:00 Duration=2 | houre | | | | | | |

| 1) Check for sites that match Additional | al Net = None and Image = | ROCK> CU, KU, TU | J, UF,UCSD | | | | | | |
|---|---------------------------|------------------|------------|--|--|--|--|--|--|
| 2)start with 3 site resource demand CPU = 30 Mem = 30 on each site | | | | | | | | | |
| 2.1) Check for sites that has capacity for the resource demand None | | | | | | | | | |
| 2.2) Create combination as results> None | | | | | | | | | |
| Results: | | | | | | | | | |
| Sites | | | | | | | | | |
| No site | | | | | | | | | |
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