Note

This case is used as an example for the Interfaces page.

CPU speed and network speed of muti-site are equal to the minimum values in all sites.

Hour (x, y) x, y is CPU available, Memory available at that time.

Zone shows the location of each site that is the same or not.

Name of site, CPU, and Memory A self-defined example.

If the search returns the least number of sites (ie, if the number of sites is equal to 2 The search will stop immediately, search for sites 3 and 4)

Name	CPU capacity	Memory capacit	Additional Net	Image Type	CPU Speed (GH	Net Speed(Mbp	Zone	Hour 1 (8:00-9:0	Hour 2 (9:00-10:	Hour 3 (10:00-11	Hour 4 (11:00-12	Hour 5 (12:00-13	Hour 6 (13:00-14:00)
CU	20	40	ENT/IPOP	CENOS/ROCK	2.8	600	Asia	10,30	10,20	20,40	20,40	20,40	20,40
KU	16	32	none	CENOS/ROCK	2.3	1000	Asia	16,32	16,32	16,32	16,32	6,10	6,10
SWU	6	12	none	CENOS	2.4	90	Asia	2,2	2,2	6,12	6,12	6,12	6,12
TU	4	16	ENT	CENOS/ROCK	2.8	1000	Asia	4,16	4,16	2,2	2,2	4,16	2,8
UCSD	128	512	ENT/IPOP	ROCK	3.5	10000	Amarican	28,112	128,512	128,512	20,40	20,40	20,40
UF	128	256	IPOP	CENOS/ROCK	3.5	10000	Amarican	128,256	128,256	128,256	28,56	28,56	128,256
								*available cpu,memory					

Case 1

Search for:

No. of sites = Any, CPU=20, Mem=40, Additional Net=None, Image=ROCK, Time begin=8:00, Time end=10:00, Duration=From begin to end

Flow:

1) Check for sites that match Additional Net = None and Image = ROCK --> CU, KU, TU, UF,UCSD

2) Start with 2 sites: resource demand CPU=10, Mem=20 on each site

2.1) Check for sites that has capacity for the resource demand --> CU, KU, UF,UCSD

2.2) For each site, check available cpu,memory > demand during the time specified by the user (Hour1 and Hour2) -> CU, KU, UCSD,UF

2.3) Create combination as results --> CU+KU,CU+UCSD, CU+UF, KU+UCSD,KU+UF,UCSD+UF

Results:

Sites	*CPU Needed*	*Total CPU Avail*	*Mem Needed*	*Total Mem Avai*	*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)+UCSD(2)	10:10	38/148	20:20	132/552	2.8	600	ENT/IPOP	ROCK	8:00	10:00
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)	10:10	46/144	20:20	144/544	2.3	1000	none	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
UCSD(2)+UF(2)	10:10	156/256	20:20	156/768	3.5	10000	IPOP	ROCK	8:00	10:00

Flow:

1) Check for sites that match Additional Net = None and Image = ROCK --> CU, UCSD, UF

2) Start with 2 sites: resource demand CPU=10, Mem=20 on each site

2.1) Check for sites that has capacity for the resource demand --> CU, UCSD, UF

2.2) For each site, check available cpu,memory > demand during the time specified by the user (Hour1 and Hour2) -> CU,UCSD,UF

2.3) Create combination as results --> CU+UCSD,CU+UF,UCSD+UF

Results:

Sites	*CPU Needed*	*Total CPU Avail*	*Mem Needed*	*Total Mem Avai*	*CPU Speed*	*Network Speed*	*Additional Net*	*Image Types*	*Time Begin*	*Time End*
CU(4)+UCSD(2)	10:10	38/148	20:20	142/552	2.8	600	IPOP	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
UCSD(2)+UF(2)	10:10	156/256	20:20	368/768	3.5	10000	IPOP	ROCK	8:00	10:00

Case 3

Search for:

No. of sites = Any, CPU=20, Mem=40, Additional Net=None, Image=ROCK, Time begin=8:00, Time end=12:00, Duration=2 hours

Flow:

1) Check for sites that match Additional Net = None and Image = ROCK --> CU, KU, TU, UF

2) Start with 2 sites: resource demand CPU=10, Mem=20 on each site

2.1) Check for sites that has capacity for the resource demand --> CU, KU, UF

2.2) For each site, check available cpu,memory > demand during the time specified by the user (Hour1 and 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 Net=None, Image=ROCK, Time begin=11:00, Time end=13:00, Duration=From begin to end

Flow:

1) Check for sites that match Additional Net = None and Image = ROCK --> CU, KU, TU, UF,UCSD

2) Start with 2 sites: resource demand CPU=30, Mem=30 on each site

2.1) Check for sites that has capacity for the resource demand

2.2) But in 2.1 no pair have enougth resource

3) turn to start with 3 site resource demand CPU = 20 Mem = 20 on each site

3.1) Check for sites that has capacity for the resource demand -- CU ,UCSD,UF

3.2) Create combination as results --> CU+UCSD+UF

Results:

Sites	***CPU Needed***	***Total CPU Avail***	***Mem Needed***	***Total Mem Avai***	***CPU Speed***	***Network Speed***	***Additional Net***	***Image Types***	***Time Begin***	***Time End***
CU(4)+UCSD(2)+UF(2)	20:20:20	68/276	20:20:20	136/808	2.8	600	IPOP	ROCK	11:00	13:00

Case 5

Search for:

No. of sites = 4, CPU=60, Mem=60, Additional Net=None, Image=ROCK, Time begin=8:00, Time end=12:00, Duration=2 hours

Flow:

1) Check for sites that match Additional Net = None and Image = ROCK --> CU, KU, TU, UF,UCSD

2)start with 3 site resource demand CPU = 15 Mem = 15 on each site

2.1) Check for sites that has capacity for the resource demand -- CU ,KU,UCSD,UF

2.2) Create combination as results --> CU+KU+UCSD+UF (in Hour3,4)

Results:

Sites	***CPU Needed***	***Total CPU Avail***	***Mem Needed***	***Total Mem Avai***	***CPU 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	600	IPOP	ROCK	10:00	12:00

Case 6

Search for:

No. of sites = 2, CPU=60, Mem=60, Additional Net=None, Image=ROCK, Time begin=11:00, Time end=14:00, Duration=2 hours

Flow:

1) Check for sites that match Additional Net = None and Image = ROCK --> CU, KU, TU, 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														