

```

MATLAB
File Edit Debug Desktop Window Help
>> u=[0 20 240 120 4.8;20 0 120 2.4 30;240 120 0 12 24;120 2.4 12 0 120;4.8 30 24 120 0]
u =
    0  20.0000  240.0000  120.0000   4.8000
  20.0000    0  120.0000   2.4000  30.0000
 240.0000 120.0000    0  12.0000  24.0000
 120.0000  2.4000  12.0000    0 120.0000
  4.8000  30.0000  24.0000 120.0000    0
>> [result, routes]= parallel(3, u)
result =
    28.8000
routes =
     3     4
     4     2
     3     5
     5     1
>>
Start

```

Fig S.1. Result of selecting 3 (C) as resource point when migrate data in parallel among fully connected centers

```

MATLAB
File Edit Debug Desktop Window Help
Current Directory: C:\Users\vig\Desktop
>> u=[0 20 inf 120 4.8;20 0 inf inf inf;inf inf 0 12 24;120 inf 12 0 120;4.8 inf 24 120 0]
u =
    0  20.0000   Inf 120.0000   4.8000
  20.0000    0   Inf   Inf   Inf
   Inf   Inf    0 12.0000  24.0000
 120.0000   Inf 12.0000    0 120.0000
  4.8000   Inf 24.0000 120.0000    0
>> [result, routes]= parallel(3, u)
result =
    48.8000
routes =
     3     4
     3     5
     5     1
     1     2
>>
Start

```

Fig S.2. Result of selecting 3 (C) as resource point when migrate data in parallel among non-fully connected centers

The image shows a MATLAB window with the following content:

```
u =  
    0 20.0000    Inf 120.0000  4.8000    Inf    Inf    Inf    Inf  
 20.0000    0    Inf  12.0000    Inf  5.0000    Inf    Inf    Inf  
    Inf    Inf    0  12.0000  24.0000    Inf    Inf  64.0000    Inf  
120.0000  12.0000  12.0000    0 120.0000    Inf    Inf    Inf    Inf  
  4.8000    Inf  24.0000 120.0000    0    Inf    Inf    Inf  48.0000  
    Inf  5.0000    Inf    Inf    Inf    0 32.0000  10.0000    Inf  
    Inf    Inf    Inf    Inf    Inf 32.0000    0 16.0000    Inf  
    Inf    Inf 64.0000    Inf    Inf 10.0000 16.0000    0    Inf  
    Inf    Inf    Inf    Inf 48.0000    Inf    Inf    Inf    0  
    Inf    Inf    Inf 32.0000    Inf    Inf 12.0000    Inf  4.0000  
  
>> [result, routes]= parallel(3, u)  
result =  
    55  
routes =  
     3     4  
     4     2  
     3     5  
     5     1  
     2     6  
     6     8  
     4    10  
    10     9  
     8     7
```

Fig S.3. Result of selecting 3 (C) as resource point when migrate data with nodes increasing