

The Same Big Problem..

 Need for *data placement*:


- ☐ *Locate the data*

- ☐ *Send data to processing sites*

- ☐ *Share the results with other sites*

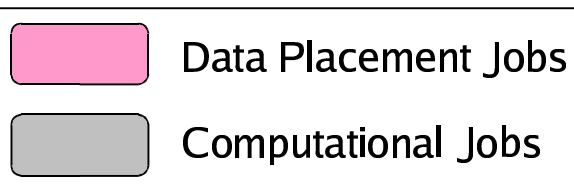
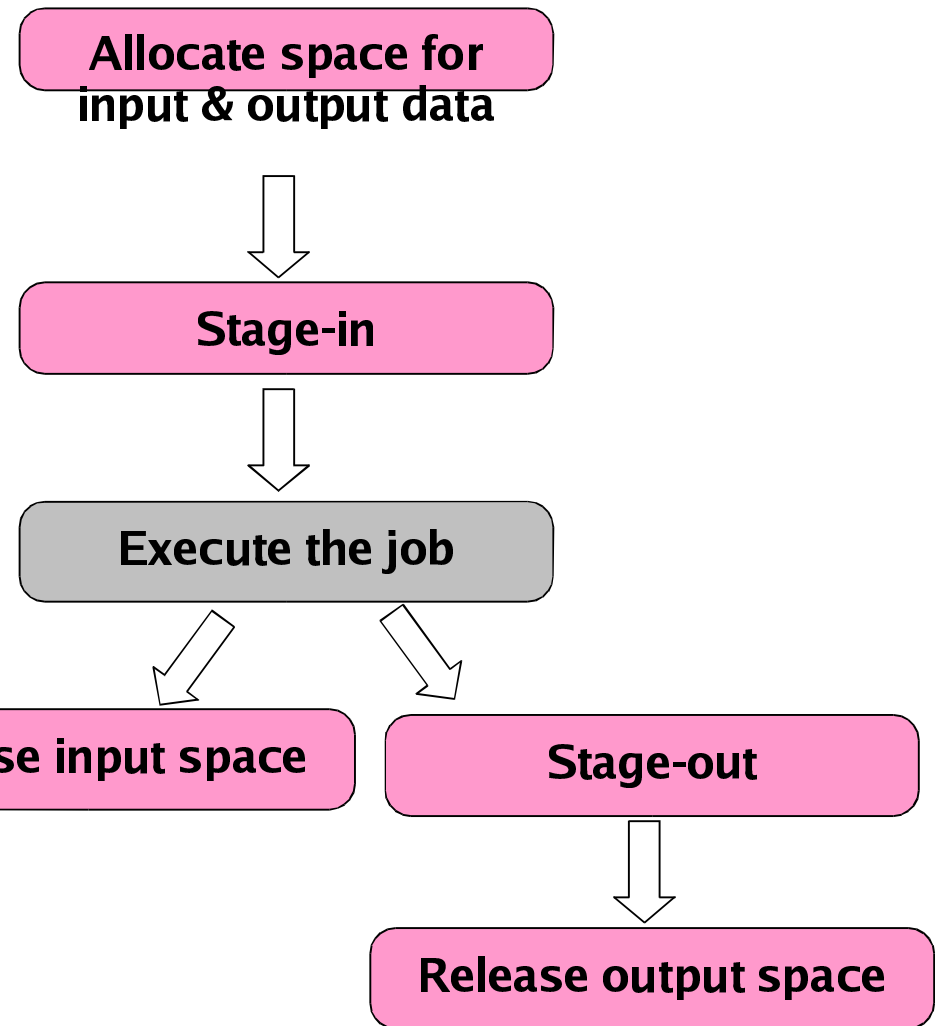
- ☐ *Allocate and de-allocate storage*

- ☐ *Clean-up everything*

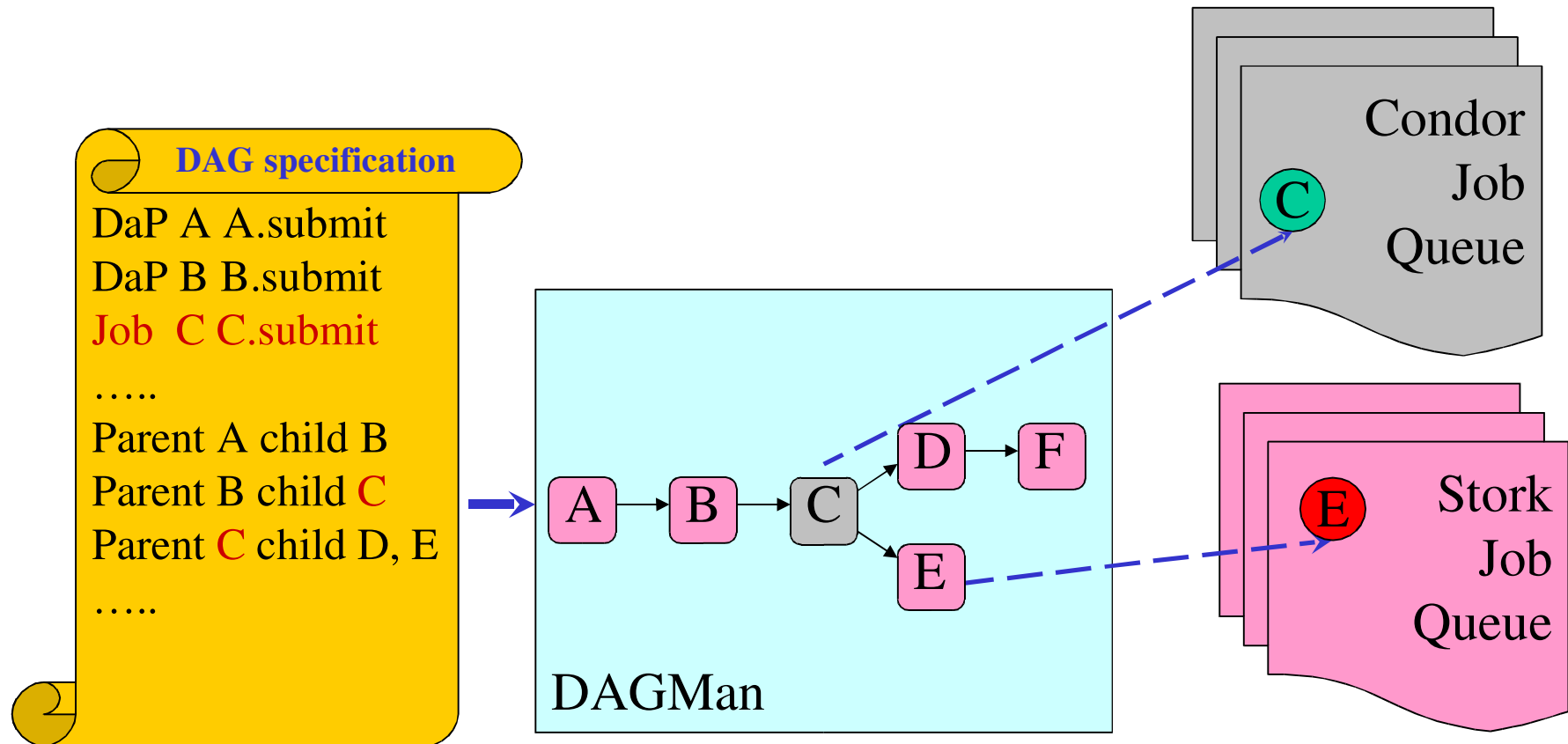
 *Do these reliably and efficiently*

The Concept

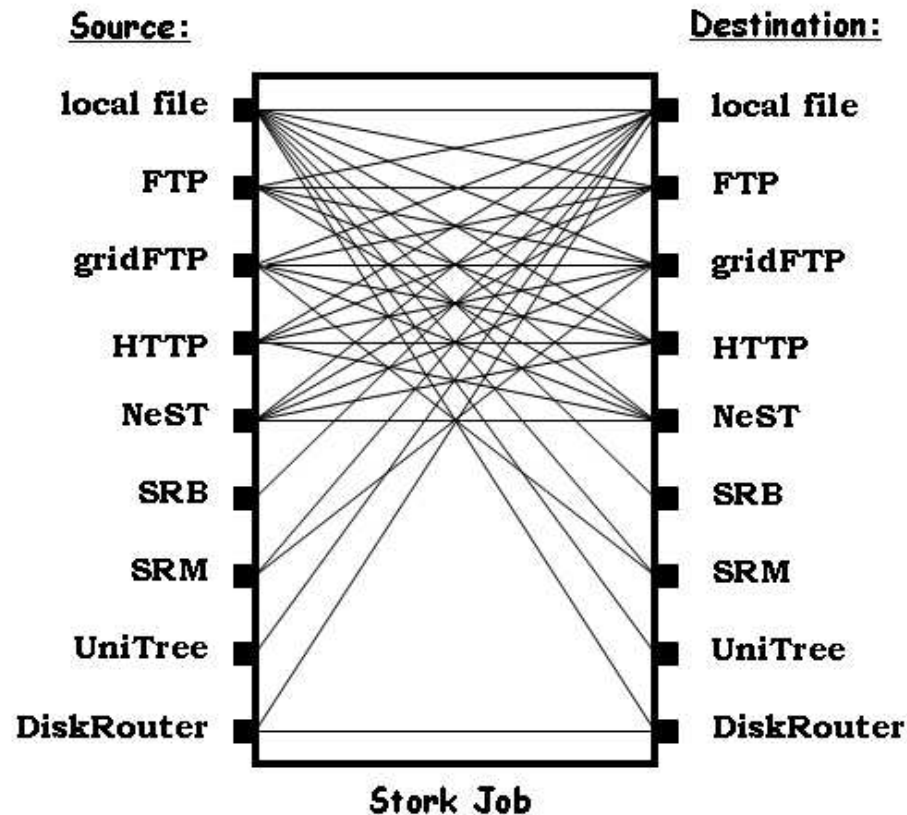
- Stage-in
- Execute the Job
- Stage-out



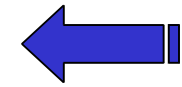
The Concept



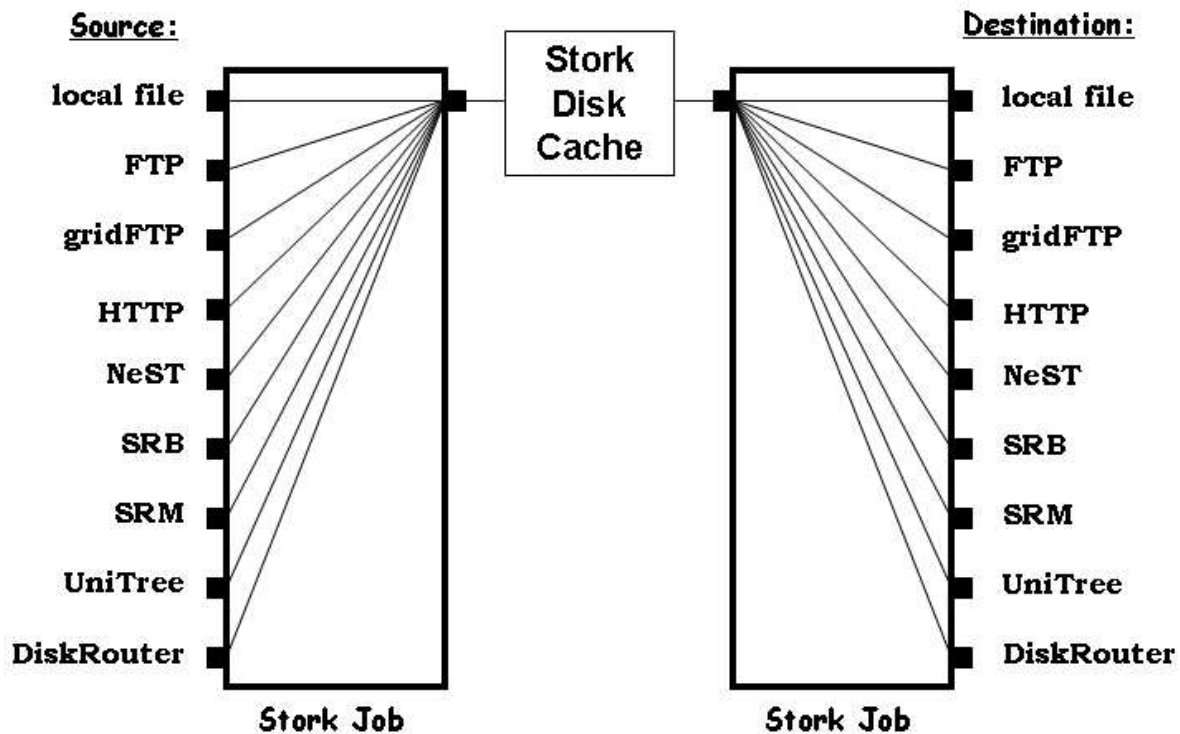
Support for Heterogeneity



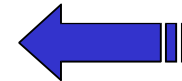
*Protocol
translation
using **Stork**
memory buffer.*



Support for Heterogeneity



*Protocol
translation
using Stork
Disk Cache.*



Failure Recovery

```
[  
    Type    = “Transfer”;  
    Src_Url = “srb://ghidorac.sdsc.edu/kosart.condor/x.dat”;  
    Dest_Url = “nest://turkey.cs.wisc.edu/kosart/x.dat”;  
    .....  
    .....  
    Max_Retry = 10;  
    Restart_in = “2 hours”;  
]
```

Efficient Resource Utilization

- Control number of concurrent transfers from/to any storage system
 - Prevents overloading

Run-time Adaptation

- Dynamic protocol selection

```
[  
  dap_type = "transfer";  
  src_url   = "drouter://slic04.sdsc.edu/tmp/test.dat";  
  dest_url  = "drouter://quest2.ncsa.uiuc.edu/tmp/test.dat";  
  alt_protocols = "nest-nest, gridftp-gridftp";  
]
```

```
[  
  dap_type = "transfer";  
  src_url   = "any://slic04.sdsc.edu/tmp/test.dat";  
  dest_url  = "any://quest2.ncsa.uiuc.edu/tmp/test.dat";  
]
```


Host Protocol Library

```
[  
    hostname = "slic04.sdsc.edu";  
    protocol  = "gridftp, ftp";  
]  
  
[  
    hostname = "quest2.ncsa.uiuc.edu";  
    protocol  = "http, ftp";  
]  
  
[
```