

# Running Hama Over InfiniBand

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- Java 7+ required.

### Create an SDP configuration file

Each BSP peer (task) will have its own port number for communicating with others. For example, if you set `set bsp.peer.port` to 61000 and set `bsp.tasks.maximum` to 5, BSP peers will use the port range from 61000 to 61005.

To enable SDP support for BSP peers, create a configuration file like the following sample:

```
[edward@192.168.10.1 ~]# cat ${HAMA_HOME}/conf/sdp.conf
# Use SDP when binding to
bind 192.168.10.1 61000-61010

# Use SDP when connecting to
connect 192.168.10.0/24 61000-61010
```

NOTE: This configuration file must reside on every node.

### Set the system property that specifies the location of the configuration file

And then, set the location of the configuration file by adding `-Dcom.sun.sdp.conf` to the `bsp.child.java.opts` property as following:

```
<property>
  <name>bsp.child.java.opts</name>
  <value>-Dcom.sun.sdp.conf=${HAMA_HOME}/conf/sdp.conf -Xmx1024m</value>
  <description>Java opts for the groom server child processes.
  The following symbol, if present, will be interpolated: <at:var at:name="taskid" /> is replaced
  by current TaskID. Any other occurrences of '@' will go unchanged.
  For example, to enable verbose gc logging to a file named for the taskid in
  /tmp and to set the heap maximum to be a gigabyte, pass a 'value' of:
    -Xmx1024m -verbose:gc -Xloggc:/tmp/<at:var at:name="taskid" />.gc
  The configuration variable bsp.child.ulimit can be used to control the
  maximum virtual memory of the child processes.
</description>
</property>
```

If everything is OK, you will see the following logs.

```
CONNECT to 192.168.10.2:61005 (socket converted to SDP protocol)
CONNECT to 192.168.10.5:61002 (socket converted to SDP protocol)
CONNECT to 192.168.10.4:61003 (socket converted to SDP protocol)
CONNECT to 192.168.10.1:61006 (socket converted to SDP protocol)
...
```

1. [http://en.wikipedia.org/wiki/Sockets\\_Direct\\_Protocol](http://en.wikipedia.org/wiki/Sockets_Direct_Protocol)