C.4 Execution Options: Java

The Java execution command `x10` has a number of options as well.

C.4.1 Class Path: `-classpath` *`path`*

This option specifies the search path for class files.

C.4.2 Library Path: `-libpath` *`path`*

This option specifies the search path for native libraries.

C.4.3 Heap Size: `-ms`*`size`* and `-mx`*`size`*

Sets the minimum and maximum size of the heap.

C.4.4 Stack Size: `-ss`*`size`*

Sets the maximum size of the stack.

C.4.5 Places: `-np` *`count`*

Specify the number of places.

C.4.6 Hosts: `-host` *`host1,host2,...`* or `-hostfile` *`file`*

Specify the hosts either by the list of host names or the host file.

C.4.7 Runtime: `-x10rt` *`impl`*

This option tells which runtime implementation to use. The choices are `sockets`, `JavaSockets` (experimental), and `mpi` (experimental).

C.4.8 Help: `-h`

Prints a listing of all execution options.

C.5 Running X10

An X10 application is launched either by a direct invocation of the generated executable or using a launcher command. The specification of the number of places and the mapping from places to hosts is transport specific and discussed in §C.6 for Managed X10 (Java back end) and §C.7 for Native X10 (C++ back end). For distributed runs, the x10 distribution (libraries) and the compiled application code (binary or bytecode) are expected to be available at the same paths on all the nodes.

Detailed, up-to-date documentation may be found at `http://x10-lang.org/documentation/practical-x10-programming/x10rt-implementations.html`

C.6 Managed X10

Managed X10 applications are launched using the x10 script followed by the qualified name of the main class.

```
x10c HelloWholeWorld.x10
x10 HelloWholeWorld
```

The main purpose of the x10 script is to set the jvm classpath and the `java.library.path` system property to ensure the x10 libraries are on the path.

C.7 Native X10

On most platforms and for most transports, X10 applications can be launched by invoking the generated executable.

```
x10c++ -o HelloWholeWorld HelloWholeWorld.x10
./HelloWholeWorld
```

On cygwin, X10 applications must be launched using the runx10 script followed by the name of the generated executable.

```
x10c++ -o HelloWholeWorld HelloWholeWorld.x10
runx10 HelloWholeWorld
```

The purpose of the runx10 script is to ensure the x10 libraries are on the path.

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