

mpi Users Guide

6.1 Edition

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Preface

The mpi Roll provides MPICH2, MVAPICH2 and OpenMPI for a Rocks cluster. It installs the software in `/opt/mpich2`, `/opt/mvapich2`, and `/opt/openmpi` on both client and server hosts. Both static and shared MPI libraries are included with the MPICH2 and MVAPICH2 installations; for OpenMPI, only static libraries are provided. Binaries and libraries produced with the GNU compilers are always included. If the PGI and/or Intel compilers are available, compatible versions of the MPI binaries and libraries are also installed in subdirectories of each implementation installation directories.

Chapter 1. Overview

Table 1-1. Summary

Name	mpi
Version	6.1
Maintained By	Rocks Group
Architecture	i386, x86_64
Compatible with Rocks®	6.1

The mpi roll has the following requirements of other rolls. Compatibility with all known rolls is assured, and all known conflicts are listed. There is no assurance of compatibility with third-party rolls.

Table 1-2. Compatibility

Requires	Conflicts
Base	
Kernel	
OS	

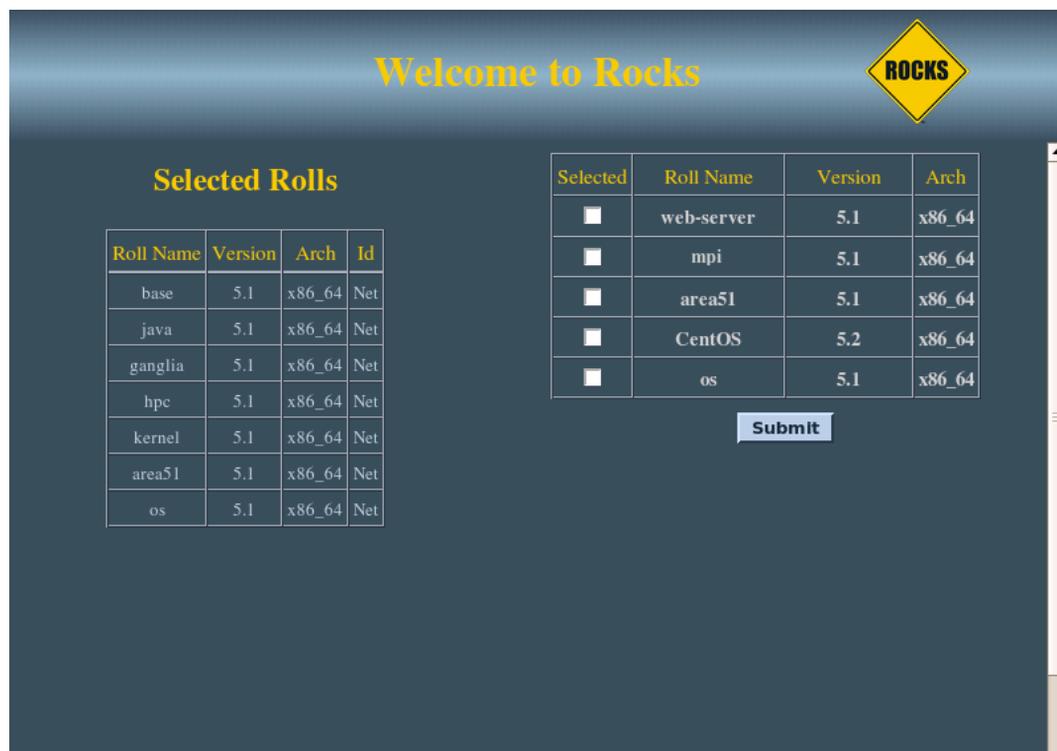


This roll has been released independent of the corresponding Rocks® release. It therefore requires the complete **OS** roll and will not function correctly if using only the **Jumbo** or incomplete set of **OS** CDRoms.

Chapter 2. Installing

2.1. On a New Server

The mpi roll should be installed during the initial installation of your server (or cluster). This procedure is documented in section 1.2 of the Rocks® usersguide. You should select the mpi roll from the list of available rolls when you see a screen that is similar to the one below.



2.2. On an Existing Server

The mpi Roll may also be added onto an existing server (or frontend). For sake of discussion, assume that you have an iso image of the roll called `mpi.iso`. The following procedure will install the Roll, and after the server reboots the Roll should be fully installed and configured.

```
$ su - root
# rocks add roll mpi.iso
# rocks enable roll mpi
# cd /export/rocks/install
# rocks create distro
# rocks run roll mpi | bash
# init 6
```

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Rocks(r)
www.rocksclusters.org
version 5.6 (Emerald Boa)
version 6.1 (Emerald Boa)

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The MVAPICH2 software package is developed by the team members of The Ohio State University's Network-Based Computing Laboratory (NBCL), headed by Professor Dhabaleswar K. (DK) Panda.

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Notes

1. <http://cvs.rocksclusters.org>