

# Guide to the **pbdPROF** Package

Gaurav Sehrawat<sup>1</sup>, Wei-Chen Chen<sup>2</sup>, Drew Schmidt<sup>3</sup>, Pragneshkumar Patel<sup>3</sup>, and  
George Ostrouchov<sup>2,3</sup>

<sup>1</sup>Jaypee Institute of Information Technology  
Uttar Pradesh, India

<sup>2</sup>Computer Science and Mathematics Division,  
Oak Ridge National Laboratory,  
Oak Ridge, TN, USA

<sup>3</sup>Remote Data Analysis and Visualization Center  
University of Tennessee,  
Knoxville, TN, USA

July 5, 2013

## Contents

<b>Acknowledgement</b>	<b>1</b>
<b>1 Introduction</b>	<b>2</b>
1.1 System Requirements . . . . .	2
<b>2 Installation</b>	<b>3</b>
2.1 fpmPI . . . . .	3
2.2 mpiP . . . . .	3
2.3 Test Script . . . . .	3
<b>3 FAQ</b>	<b>3</b>

© 2013 pbdR Core Team.

Permission is granted to make and distribute verbatim copies of this vignette and its source provided the copyright notice and this permission notice are preserved on all copies.

This publication was typeset using L<sup>A</sup>T<sub>E</sub>X.

## Acknowledgement

Sehrawat was generously supported by Google for Google Summer of Code 2013.

Chen and Ostrouchov were supported in part by the project “Visual Data Exploration and Analysis of Ultra-large Climate Data” funded by U.S. DOE Office of Science under Contract No. DE-AC05-00OR22725. Ostrouchov, Schmidt, and Patel were supported in part by the project “NICS Remote Data Analysis and Visualization Center” funded by the Office of Cyberinfrastructure of the U.S. National Science Foundation under Award No. ARRA-NSF-OCI-0906324 for NICS-RDAV center.

**Warning:** This document is written to explain the main functions of **pbdPROF** (?), version 0.1-0. Every effort will be made to ensure future versions are consistent with these instructions, but features in later versions may not be explained in this document.

Information about the functionality of this package, and any changes in future versions can be found on website: “Programming with Big Data in R” at <http://r-pbd.org/>.

## 1 Introduction

The main features of **pbdPROF** are:

1. ...

### 1.1 System Requirements

**pbdPROF** requires an MPI installation and an MPI-using package, such as **pbdMPI** (?) or **Rmpi** (?). For information regarding how to install MPI or **pbdMPI**, please see the **pbdMPI** vignette (?) or the pbdR website <http://r-pbd.org/>.

## 2 Installation

### 2.1 fpmPI

### 2.2 mpiP

### 2.3 Test Script

Below we provide sample scripts to test that the installation of **pbdPROF** was successful. For **pbdMPI**, use:

Test script for pbdMPI

```
library(pbdMPI)
init()

set.seed(comm.rank())
x <- allreduce(rnorm(100))

finalize()
```

and for **Rmpi**, use:

Test script for pbdMPI

```
library(Rmpi)

# ...
```

## 3 FAQ