# IBM

IBM Systems - iSeries

## Networking
## Bootstrap Protocol

*Version 5 Release 4*

# IBM

IBM Systems - iSeries

# Networking
# Bootstrap Protocol

*Version 5 Release 4*

# IBM

> **Note**
>
> Before using this information and the product it supports, read the information in "Notices," on page 5.

# Contents

# Bootstrap Protocol

Bootstrap Protocol (BOOTP) provides a dynamic method for associating workstations with servers. It also provides a dynamic method for assigning workstation Internet Protocol (IP) addresses and initial program load (IPL) sources.

BOOTP is a TCP/IP protocol. It allows a client to find its IP address and the name of a load file from a server on the network. A client uses BOOTP to find this information without intervention from the user of the client.

The BOOTP server listens on the well-known BOOTP server port 67, which Dynamic Host Configuration Protocol (DHCP) also uses. Because of this, BOOTP and DHCP cannot operate at the same time on the same system (DHCP is the preferred method for supporting BOOTP clients). When the server receives a client request, it looks up the IP address for the client and returns a reply to that client. This reply contains both the IP address of the client and the name of the load file. The client then initiates a Trivial File Transfer Protocol (TFTP) request to the server for the load file.

You can work with BOOTP server properties through iSeries™ Navigator.

## Printable PDF

Use this to view and print a PDF of this information.

To view or download the PDF version, select Bootstrap Protocol (about 115 KB)

### Saving PDF files

To save a PDF on your workstation for viewing or printing:
1. Right-click the PDF in your browser (right-click the link above).
2. Click the option that saves the PDF locally.
3. Navigate to the directory in which you want to save the PDF.
4. Click **Save**.

### Downloading Adobe Reader

You need Adobe Reader installed on your system to view or print these PDFs. You can download a free copy from the Adobe Web site (www.adobe.com/products/acrobat/readstep.html) .

## Configure the BOOTP server

Use the Configure TCP/IP BOOTP (CFGTCPBP) command to configure the BOOTP server.

There are two ways to configure the BOOTP server:
- Specify the CFGTCPBP command from the command prompt.
- Specify the Configure TCP/IP Applications (CFGTCPAPP) command from the command line and select option 4 (Configure BOOTP).

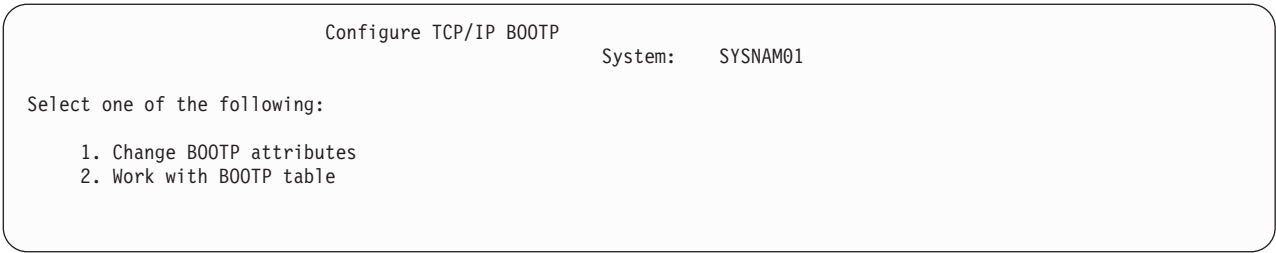After you specify the command, the following display appears:

```
                          Configure TCP/IP BOOTP
                                              System:    SYSNAM01

  Select one of the following:

       1. Change BOOTP attributes
       2. Work with BOOTP table
```

*Figure 1. Configure TCP/IP BOOTP*

The following commands control the BOOTP server:

- The Change BOOTP Attributes (CHGBPA) command allows an administrator to set the configurable attributes for the BOOTP server.
- The Work with BOOTP Table (WRKBPTBL) command allows an administrator to work with the BOOTP table.

## Change BOOTP attributes

You can change BOOTP attributes.

To change BOOTP attributes, follow these steps:

1. Specify the CFGTCPBP command from the command prompt.
2. Select option 1 (Change BOOTP Attributes) on the Configure TCP/IP BOOTP display to view the Change BOOTP Attributes display.

   You can also type CHGBPA, and then press F4.

The AUTOSTART parameter on the display controls whether the BOOTP server is going to start automatically when TCP/IP starts when you use the STRTCP command.

**Note:** You must have *IOSYSCFG special authority to make changes to the BOOTP attributes with the Change BOOTP Attributes (CHGBPA) command.

```
                  Change BOOTP Attributes (CHGBPA)

  Type choices, press Enter.

  Autostart server . . . . . . . .    *YES          *YES, *NO, *SAME
```
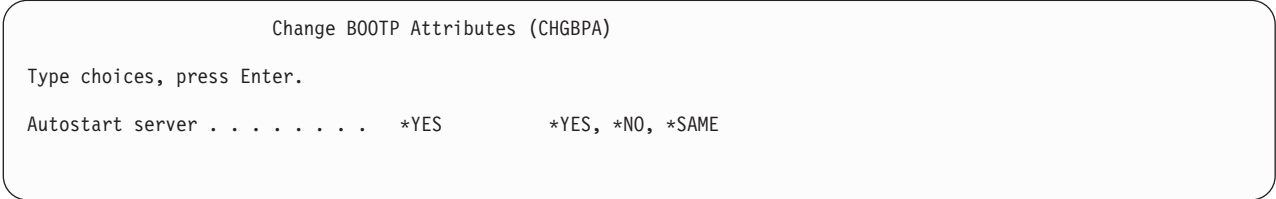
*Figure 2. Change BOOTP Attributes (CHGBPA)*

## Work with the BOOTP table

The administrator uses the Work with BOOTP Table display to add, change, remove, or display an entry in the BOOTP table.

To work with BOOTP table, perform the following steps:

1. Specify the CFGTCPBP command from the command prompt.

2. Select option 2 (Work with BOOTP Table) on the Configure TCP/IP BOOTP display to view the Work with BOOTP Table display.

   You can also type WRKBPTBL.

```
                     Work with BOOTP Table
                                           System:   SYSNAM01
 Type options, press Enter.
   1=Add   2=Change   4=Remove   5=Display

       Client
       Host                          MAC              IP
 Opt   Name                          Address          Address

       act01.ibm.com                 02.01.8C.06.34.98  9.130.42.1


```

*Figure 3. Work with BOOTP Table (WRKBPTBL)*

# Appendix. Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106-0032, Japan

**The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:** INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation

Software Interoperability Coordinator, Department YBWA
3605 Highway 52 N
Rochester, MN 55901
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this information and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement, IBM License Agreement for Machine Code, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. _enter the year or years_. All rights reserved.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

## Programming Interface Information

This Bootstrap Protocol publication documents intended Programming Interfaces that allow the customer to write programs to obtain the services of IBM i5/OS.

## Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

| IBM
| IBM (logo)
| i5/OS
| iSeries

Other company, product, and service names may be trademarks or service marks of others.

## Terms and conditions

Permissions for the use of these publications is granted subject to the following terms and conditions.

**Personal Use:** You may reproduce these publications for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative works of these publications, or any portion thereof, without the express consent of IBM.

**Commercial Use:** You may reproduce, distribute and display these publications solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of these publications, or reproduce, distribute or display these publications or any portion thereof outside your enterprise, without the express consent of IBM.

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the publications or any information, data, software or other intellectual property contained therein.

IBM reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the publications is detrimental to its interest or, as determined by IBM, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations.

IBM MAKES NO GUARANTEE ABOUT THE CONTENT OF THESE PUBLICATIONS. THE PUBLICATIONS ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

**IBM** ®

Printed in USA