



Burstware®
Quick Start Guide

Burst.Com, Inc.
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Introduction

Guide to This Document

Burstware Quick Start Guide is written for system or network administrators who want to set up a basic Burstware deployment quickly. This guide:

- Describes the steps in the deployment process
- Identifies the information you must obtain before starting the installation
- Identifies the software, hardware, and network resources required to support the Quick Start deployment
- Provides instructions on getting the Quick Start deployment up and running

This document is a concise, practical guide for getting a specific Burstware deployment running. If this specific deployment, which is described in detail in [Chapter 2](#), does not meet your particular needs, refer to the *Burstware User Guide*. A comprehensive guide to planning and deploying Burstware, *Burstware User Guide* can help you determine how to satisfy unique or complex application requirements with Burstware.

Regardless of your needs, you may find *Burstware Quick Start Guide* a useful introduction to the process of setting up a Burstware deployment.

Documentation and Supporting Files

The **docs** subdirectory of your Burstware installation directory contains the following documentation and supporting files:

- **burstware.pdf**—This document, *Burstware User Guide*, is a comprehensive reference for planning and deploying Burstware.
- **worksheet_windows.pdf**, **worksheet_solaris.pdf**, **worksheet_linux.pdf**—These documents are installation worksheets for use in planning broader Burstware deployments.
- **readme.pdf**—This document contains release notes for the current version of Burstware.
- **BurstLicense.txt**—This document contains your Burst.Com license agreement.

NOTE: Use Acrobat Reader to open .pdf files.

The following file is found in the **media** subdirectory of your Burstware installation directory:

- **burstware1.mpg**—This file is a short sample media file.

To access the documentation online, click on the Burstware Guide shortcut in the Programs/Burstware folder in your Start menu.

Getting Help

To obtain help from Burst.Com Technical Support, e-mail support@burst.com.



Overview

This chapter provides an overview of the Burstware software solution and describes the Quick Start deployment discussed throughout this guide. Information is presented in the following sections:

- [What Is Burstware?](#)
- [What Is the Quick Start Deployment?](#)

What Is Burstware?

Burstware is multimedia delivery software that can run over the Internet and TCP/IP intranets. Burstware delivers industry-standard CODECs and file formats to industry-standard players, such as Microsoft Windows Media Player and Apple QuickTime Player for Windows. You can use Burstware to manage and deploy network bandwidth efficiently, and to provide the highest quality viewing and listening experience for end users.

In a burst-enabled environment, the Burstware components manage the delivery of multimedia content to media players across your network or the Internet. Burstware accepts requests from client-side players, monitors the status of the components that send and receive multimedia files, and “bursts” requested content into player buffers.

Burstware allows you to allocate bandwidth to your multimedia applications and control the impact of multimedia traffic on your network. You can minimize the effects of unpredictable network performance on media file play, optimizing the end user’s viewing experience.

The components of a Burstware deployment include:

- **Burstware Conductor**—Burstware Conductor tracks and manages resources and requests in a Burstware deployment.
The conductor accepts requests for content from burst-enabled media players, and routes the player to the Burstware Server with the most bandwidth available to serve the requested content. Running both an active and a standby conductor allows automatic failover, should the active conductor become unavailable.
- **Burstware Server**—One or more Burstware Servers deliver multimedia files to media players upon request.
Each server reports its availability to the conductor that manages it, allowing the conductor to route player requests appropriately. Companies often run multiple Burstware Servers for load balancing and failover.
- **Burst-enabled media players** —An end user with a burst-enabled media player can play content stored on Burstware Servers.
Burstware Bridges (currently available for Windows Media Player and for Apple Quick Time Player for Windows) enable these industry-standard players to play video and audio files delivered by a Burstware Server. Like ordinary media players, a burst-enabled player can run either standalone or embedded in an application, such as a web page.

For a more detailed discussion of how the Burstware components work together, see Chapter 2 of *Burstware User Guide*.

What Is the Quick Start Deployment?

Because Burstware is designed to meet a broad range of requirements, there are a variety of ways to configure and deploy it. A simple Burstware deployment can consist of one conductor and one server on a single machine. A large deployment can include multiple Burstware installations across the globe. Your particular requirements determine the number of conductors and servers you need, and the best location for each.

This document provides detailed instructions for establishing a specific Burstware deployment, referred to throughout as the “Quick Start deployment.”

The Quick Start deployment is illustrated in [Figure 1](#).

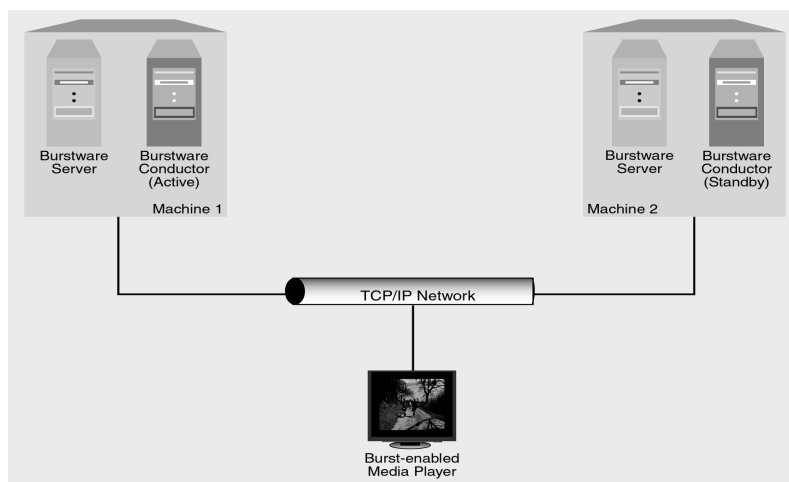


Figure 1: Quick Start deployment

In this simple deployment:

- Machine 1 is running the active conductor and one available server. (For a discussion of the difference between an available and a standby server, see Chapter 3 of *Burstware User Guide*.)
- Optionally, Machine 2 is running a standby conductor and a second server. Addition of a second server allows load balancing and supports failover.

You can serve approximately 400 simultaneous end users with the Quick Start deployment. The number of end users you can support depends on your available bandwidth, the terms of your Burstware license agreement, the encoded bit rate of your media, and the characteristics—such as CPU and disk—of the machines running Burstware Servers.

The Quick Start deployment instructions assume that the machine where you install the Burstware components is essentially dedicated to running Burstware. It is possible to run other applications on the Burstware machine while running Burstware, but Burstware's performance may be affected if the other applications make significant demands on machine and network resources.

It is also assumed that the Burstware components are not separated from end users by a restrictive firewall. You can use Burstware to serve Internet users from behind a firewall; however, the Quick Start deployment is not designed for this purpose. For information on how to deploy Burstware behind a firewall, see Chapter 3 of *Burstware User Guide*.



Planning the Quick Start Deployment

This chapter describes the process of setting up your Quick Start deployment. It discusses planning considerations related to your hardware and software environment, and how your requirements affect the deployment process. Information is presented in the following sections:

- [Deployment Process Overview](#)
- [Pre-Installation Considerations](#)
- [Last Minute Details](#)

Deployment Process Overview

For the Quick Start deployment, you will install Burstware components on one machine, make sure everything is working correctly, and then add a second machine to the deployment. The steps in this process are summarized below. Detailed instructions are provided in [Chapter 5, Quick Start Installation and Startup](#).

1. Plan and stage your installation environment.
2. Install the conductor and server on Machine 1.
3. Confirm communication between the conductor and the server.
4. Burst-enable one or more media players, by installing the Burstware Bridge on the player machine. If desired, install the Burstware Bridge Monitor.
5. Test the standalone burst-enabled player.
6. Set up web pages that embed a media player—this allows end users to access multimedia content from a page on your web site.
7. Set up a web page from which end users can download and install the Burstware Bridge.
8. Install a standby conductor and an additional server on Machine 2, to enable load balancing and failover.

Pre-Installation Considerations

Before installing Burstware, select the machine or machines where you will install the software, and gather the information you will need during installation.

This section summarizes the factors you should consider as you prepare for installation. For more information on any of the topics that follow, see Chapter 3 of *Burstware User Guide*.

- **Conductor and server machine**—Verify that the machine has the required hardware and software resources. See the section, [Conductor and Server Machine Requirements, on page 12](#), for details.
- **Number of users**—The Quick Start deployment is designed to support approximately 400 simultaneous users. You may be able to support more users, depending on the



capabilities of your conductor and server machines, the encoded bit rate of your media files, bandwidth availability, and the terms of your Burst.Com license agreement.

- Player machine configuration—Verify that the machines running players you intend to burst-enable are properly configured, as described in the section, [Player Machine Requirements, on page 13](#).

Make sure you understand the network bandwidth available to your end users. This, along with media file encoded bit rates will have an impact on media planning, as discussed below.

- Media file encoded bit rates—The encoded bit rate of the media file served to a client should not exceed the client’s average available bandwidth. For this reason, ensure that your media library contains versions of media files for the lowest bandwidth connection you want to support. See the section, Play Rates and the Client’s Available Bandwidth, in Chapter 3 of *Burstware User Guide*, for more information.
- Managed bandwidth—Your “managed bandwidth” is the amount of bandwidth per server, in megabits per second, that you allocate to burst-enabled multimedia traffic. Your conductor is licensed for a certain amount of bandwidth it can manage. Within the limits of your Burst.Com license agreement, you can allocate this bandwidth to one or more servers.

When you install a server, you assign it a specific amount of managed bandwidth, in megabits per second. In the Quick Start deployment, you first allocate all of your managed bandwidth to Machine 1. Then, if you choose to install Machine 2, you re-allocate managed bandwidth, to share it between the two servers. Keep in mind that, regardless of how much managed bandwidth you are licensed for, you should never set managed bandwidth to a value greater than the sustainable transfer rate of the server machine’s disk subsystem. Managed bandwidth should also never exceed the TCP/IP capacity of your network or of a server machine’s NIC card.

Factors that influence how much managed bandwidth is right for your situation include your network capacity, other network traffic, and end user demand for multimedia.

- Media files—For optimal Burstware performance, locate media directories on the conductor and server machine. If that is not possible, store them in a location available to your Burstware installation via your network.

If you add a second server, you will need to duplicate your media library. Providing an identical set of media files for each server allows failover in the event that a server becomes unavailable.

NOTE: Duplication of media files is not necessary if you use shared storage, such as a Storage Area Network (SAN) or Network Attached Storage (NAS).

A burst-enabled Windows Media Player plays a variety of industry-standard media formats, including ASF, AVI, MPEG1, MPEG2 (decoder required), MP3, WMA, and most QuickTime formats, except for those encoded in the Sorenson CODEC.

A burst-enabled Apple QuickTime Player for Windows plays MP3 files (.mp3) and QuickTime files (.mov) encoded in QuickTime-supported CODECs, including those encoded in the Sorenson CODEC.



Last Minute Details

Before you start installing Burstware, make sure you have the following information available:

- **Conductor license key**—Burst.Com employs license keys to ensure that Burstware products are used in accordance with the terms of your license agreement. The configuration you implement must match the limits imposed by your license agreement and key. You need your license key to start and run the conductor. To obtain your license key, contact your Burst.Com sales representative at sales@burst.com.
- **Machine addresses**—Have available the IP addresses (or hostname) for each machine where a conductor and server will be installed.
- **Media directory path(s)**—Have available the path(s) to the directories where your media files are stored, if these directories already exist.



Quick Start System Requirements

This chapter describes the hardware, software, and network requirements for the Quick Start deployment.

The Quick Start deployment requires one machine where the conductor and server will be installed. For increased capacity and failover, you can add a second, similarly configured machine with the conductor and server installed. The second conductor is a standby component that is used only when the active conductor becomes unavailable. The second server allows the multimedia distribution load to be balanced across the two machines.

In addition, each client machine that accesses media files via Burstware must run a burst-enabled media player.

System requirements are described in the following sections:

- [Conductor and Server Machine Requirements](#)
- [Player Machine Requirements](#)

Conductor and Server Machine Requirements

The paragraphs below list the software, hardware and network requirements for the machines running conductors and servers.

Operating System

The conductor and server run under:

- Windows NT 4.0, Service Pack 3 or higher
- Linux Red Hat 6.0
- Solaris 2.6 or 2.7

Hardware and Software

This section lists the required hardware and software for the machine where the conductor and server will be installed.

- RAM
Server: 256 MB to 512 MB. RAM requirements for Burstware Server vary, based on the number of simultaneous users you plan to support. See Chapter 5 of *Burstware User Guide* for a complete discussion.
- Disk space for installation
50 MB. Verify that the target installation directory meets the storage requirements.
- Disk system throughput (sustained)
Must be equal to or greater than the managed bandwidth for the Burstware Server on the machine.



- Processor
Minimum: 300Mhz (Pentium II or Sparc Ultra). Recommended for environments with many simultaneous end users: dual-processor Pentium Xeon or dual-processor Sparc Ultra. Processor requirements vary based on the number of users. See Chapter 5 of *Burstware User Guide* for a complete discussion.
- Network
Burstware machines must be connected to a network that supports TCP/IP, and should have a static IP address. In choosing the location of your Burstware machines, consider your network's topology, how it is segmented, and the location of your end users.
- Network card
Ethernet 10Base T or faster. Depends on the managed bandwidth value. Should be at least 25 percent higher than managed bandwidth.

Player Machine Requirements

This section lists the hardware and software requirements for Burstware Bridge for Windows Media Player, and Burstware Bridge for Apple QuickTime Player for Windows.

- Platform—Windows 2000, Windows NT 4.0 with Service Pack 3 or higher, Windows 98, Windows 95
- Media Player—Windows Media Player Version 6.x, or Apple QuickTime Version 4.x
- RAM—Minimum: 32 MB, Recommended: 64 MB
- Disk storage—300 KB, more if using disk buffers
- Browsers—Netscape 4.5 or higher, Microsoft Internet Explorer 4 or higher
- Processor—Required: Pentium-class, 166 Mhz or greater. Recommended: Pentium II or better (300 Mhz or greater)
- Monitor—Burst.Com recommends setting monitors to display high quality color (either 16-bit or 32,000 colors)



Quick Start Installation and Startup

This chapter gives instructions for installing, starting, and verifying your Quick Start deployment. Information is presented in the following sections:

- [The Installation Procedure and Burstware Parameters](#)
- [Installing on Windows NT or Windows 2000](#)
- [Installing on Linux or Solaris](#)
- [Starting and Verifying Burstware](#)
- [Burst-Enabling Media Players](#)
- [Accessing Media Files with the Burst-Enabled Player](#)
- [Embedding a Media Player in a Web Page](#)
- [Setting up Auto-Install for the Burstware Bridge](#)
- [Expanding Your Burstware Deployment](#)

The Installation Procedure and Burstware Parameters

Configuration parameters that affect Burstware operation are stored in initialization files—**burstserver.ini** and **burstconductor.ini**. These parameters control different aspects of Burstware operation such as the TCP/IP ports that Burstware components use, the list of servers managed by a conductor, how much managed bandwidth is allocated to a server, and message logging behavior. The values of Burstware configuration parameters are set during the installation process, based on your responses to installation dialogs.

If you determine that any of the choices you made during installation—for instance, the managed bandwidth setting—must be changed, this can be accomplished later by editing the relevant parameter in the component's initialization file. Chapter 6 of *Burstware User Guide* describes the Burstware configuration parameters and provides instructions on how to modify them.

Installing on Windows NT or Windows 2000

Before starting:

- Verify that the target machine satisfies the software, hardware and network requirements specified in the section, [Conductor and Server Machine Requirements, on page 12](#).
- Exit all applications currently running, especially any existing versions of the Burstware components you plan to install.
- Log in as Administrator or another account with administrator privileges.

You can install Burstware from a Burst.Com CD-ROM or from a distribution you have downloaded from the Burst.Com web site.



Loading the CD-ROM should start the installation process. If the installation dialog is not displayed after you load the CD-ROM, use Windows Explorer to find **setup.exe** in the CD-ROM's **windows** subdirectory and double-click it.

If you downloaded the software from the Burst.Com web site, unzip the download file, and use Windows Explorer to find **setup.exe** and double-click it.

The first installation dialogs prompt you for:

- Which Burstware components to install—Check the boxes next to “Burstware Server” and “Burstware Conductor” and click Next.
- Whether you accept the terms of the Burst.Com license agreement—Click Yes to accept the terms.
- The destination path—the directory where you are installing Burstware files. The default path is C:\Program Files\Burst\Burstware. Click Next to accept the default destination path, or Browse to select a different destination path.

NOTE: The installer creates a separate directory in the destination path for each component. For example, if you choose to install a Burstware Server, Burstware creates a “server” subdirectory.

The installer then prompts you for information specific to the components you are installing.

Server Installation Dialogs

1. Media Directory Path—The media directory path is the directory where Burstware Server looks for media files at runtime.

This is the directory or directories where you keep files you want to make available to end users. To store media files in multiple directories, specify multiple paths separated by semicolons. Be sure to specify the full path on the server machine, as in this example:

```
C:/Program Files/Burst/Burstware/Media
```

After entering a media directory path, click Next.

2. Server's Managed Bandwidth—The installer prompts you for the server's managed bandwidth, in megabits per second (Mbps). The default value is 50.

For the Quick Start deployment, when installing on the first machine, you can allocate all of your conductor's licensed bandwidth to the server. Later, if you install another server on a second machine, you will reduce the bandwidth allocated to the first Burstware Server.

NOTE: [Pre-Installation Considerations, on page 9](#), discusses the factors to consider when setting managed bandwidth. In any case, make sure that a server's managed bandwidth does not exceed the sustained transfer rate of the machine's NIC or disk subsystem.

After entering a value for managed bandwidth, click Next.

3. Installing a Burstware Server as an NT Service—An NT Service starts automatically when the machine boots up, and restarts automatically if terminated. If you choose this option, the service starts automatically when the Burstware installation is complete. For



the Quick Start deployment, we suggest you run the server as a standard process, not as an NT Service.

Conductor Installation Dialogs

When installing Burstware Conductor, the installer prompts you for the following information:

1. **License Key**—Enter the license key exactly as provided by Burst.Com. Any other characters, including white spaces and tabs, will cause the conductor to fail to start. If the key was provided in an e-mail message, copy the key from the e-mail and paste it into the License field.

After entering a license key, click Next.

2. **Server List**—The conductor sends the server list to a burst-enabled player, which connects to one of these servers to play requested media files.

The server list field automatically contains the hostname of the machine where you are installing the conductor. The default port assignment—8020—allows you to run the conductor and server on the same machine, and does not conflict with typical web server port assignments.

The server list can contain one or more Burstware Server entries. Each entry has the form *hostname:port_number* or *IP_address:port_number*. The server machine identifier you supply must be one that a player machine can resolve—for this reason, it is preferable to use an IP address. If instead, you use a hostname, fully qualify it. The hostname or IP address is separated from the port number by a colon, as in the following two examples:

```
165.14.2.147:8020
```

```
nyserver.burst.com:8020
```

When the server list contains multiple servers, use semicolons to separate entries in the list.

After entering a server list, click Next.

3. **Installing a Burstware Conductor as an NT Service**—An NT Service starts automatically when the machine boots up, and restarts automatically if terminated. If you choose this option, the service starts automatically when the Burstware installation is complete. For the Quick Start deployment, we suggest you run the conductor as a standard process, not as an NT Service.
4. Click Finish to complete the installation.

Installing on Linux or Solaris

Follow the instructions in this section to install the conductor and server on Linux or Solaris.

Before starting, verify that the machine where you plan to install Burstware components satisfies the software, hardware and network requirements specified in the section, [Conductor and Server Machine Requirements, on page 12](#).



If you are installing on a Solaris machine, Burst.Com recommends setting the number of files that a process can have open to 1024 or higher. If the number of files is set too low, a heavily loaded server may not be able to open a media file for a new client, and an error message containing the text “too many open files” will be displayed. See the Solaris documentation on the **ulimit -n** command for additional information.

Steps to Install

1. Exit all applications, especially any existing versions of the Burstware components you plan to install.
2. Log in as root.
3. Access the Burstware CD-ROM.
4. Change your working directory to the Burstware directory.
5. Launch the installer with the following script:

```
% ./install.sh
```

The Burstware installer starts.

NOTE: If the operating system type is invalid, the installer aborts.

6. The Burstware License Agreement is displayed. Use the space key to page through to the end of the license agreement, and type “agree” to accept the terms of the license agreement, or type “refuse” to abort the installation. Press Enter.
7. The installer prompts you to choose the Burstware components to install. Type “yes” to install the conductor and press Enter. Type “yes” to install the server and press Enter.
8. The installer prompts you to choose an installation directory. The default installation directory is /usr/local/burst/burstware. Either accept this default, or type another installation directory location. Press Enter.

NOTE: If a Burstware installation directory already exists, the installer asks whether you would like to keep your existing Burstware installation. If you choose to keep it, you will be prompted for a directory location for the new installation. The installer will not delete your existing installation.

9. The installer prompts you for a license key. Enter the license key exactly as provided to you by Burst.Com. Any other characters, including white spaces and tabs, will cause the conductor to fail to start. After typing in the license key, press Enter.
10. The installer prompts you for a list of the machines where Burstware Server will run. A machine is identified by a hostname or IP address, and a port number.

The server machine identifier you supply must be one that a player machine can resolve—for this reason, it is preferable to use an IP address. If instead, you use a hostname, fully qualify it. The hostname or IP address is separated from the port number by a colon, as in the following two examples:

```
165.14.2.147:8020
```

```
nyserver.burst.com:8020
```



When the server list contains multiple servers, use semicolons to separate entries in the list.

The port number you specify becomes the value of the server's **basePort** parameter in the server initialization file. Burst.Com recommends running the server on port 8020—this allows you to run the conductor and server on the same machine, and does not conflict with typical web server port assignments.

Enter the hostname or IP address of the current machine, and the port number and press Enter.

11. The installer prompts you for the media directory or directories where the server looks for media files. The default media path is the name of the installation directory, followed by “/media”.

Be sure to specify the full path on the server machine, as in this example:

```
/usr/local/burst/burstware/media/mpeg
```

Separate multiple directories in the list with semicolons. After entering the media path, press Enter.

12. The installer prompts you for the server's managed bandwidth, in megabits per second. The default value is 50.

For the Quick Start deployment, when installing on the first machine, you can allocate all of your conductor's licensed bandwidth to the server. Later, if you install another server on a second machine, you will reduce the bandwidth allocated to the first Burstware server.

After entering a value for managed bandwidth, press Enter.

NOTE: [Pre-Installation Considerations, on page 9](#), discusses the factors to consider when setting managed bandwidth. In any case, make sure that a server's managed bandwidth does not exceed the sustained transfer rate of the machine's NIC or disk subsystem.

13. If you are logged in as “root”, the installer asks whether all installed Burstware components should be run as daemons.

A server or conductor running as a daemon starts automatically at system startup and after a restart. For the Quick Start deployment, we suggest you run the Burstware components as standard processes, rather than as daemons.

Type “no” and press Enter.

14. The installer lists the installation choices you have made and asks whether you want to proceed with the Burstware installation.

NOTE: If there is insufficient space to install Burstware, the installer displays a warning message. At this time, you can free up the appropriate amount of disk space required before continuing with the installation. See the section, [Hardware and Software, on page 12](#), for disk space requirements.

Type “yes” to confirm the installation choices and proceed. Type “no” to abort the installation if you want to change the installation choices or cannot free up enough disk space.



15. When installation is complete, the installer displays the message “Burstware Release 2.0 has been installed successfully.”

Starting and Verifying Burstware

This section explains how to start Burstware and verify successful communication between the conductor and the server.

NOTE: If you are running Burstware as an NT Service or as a daemon, refer to *Burstware User Guide* for instructions on starting the components.

Starting Burstware on Windows NT or Windows 2000

1. To start the Burstware Server, use the **Start > Programs > Burstware > Burstware Server** menu command or click the shortcut on your desktop.
2. To start the Burstware Conductor, use the **Start > Programs > Burstware > Burstware Conductor** menu command, or click the shortcut on your desktop.

Starting Burstware on Linux and Solaris

1. Change the working directory to your Burstware installation directory.
2. Start the server with the following command:

```
% ./burstserver
```

3. Start the conductor with the following command:

```
% ./burstconductor
```

NOTE: If you want to run Burstware without the Burstware GUI, include the “nogui” initialization parameter in the command line. Initialization parameters are discussed in Chapter 5 of *Burstware User Guide*.

Verifying Communications Between Components

After starting up both the conductor and server, perform the steps below to verify that the components are communicating with each other.

1. Verify that the conductor sees the server.
Choose the Monitoring tab from the “Burstware Conductor” console screen. Verify that the value in the Servers Available field is “1”.
2. Verify that the server sees the conductor.

Choose the Monitoring tab from the “Burstware Server” console screen. Verify that the value in the Conductors Connected field is “1”.

If the server cannot see the conductor, it is likely that there is an error in the conductor’s server list. To correct the error, edit the Burstware Conductor initialization file—called **burstconductor.ini**, unless you specified an alternate name when you started up the conductor—to change the value of the **serverList** parameter. After making the correction, shut down and restart the conductor.

In a Windows installation, the initialization file is in the **conductor** subdirectory of your Burstware installation directory. In Linux and Solaris installations, the initialization file is in the root installation directory.



Burst-Enabling Media Players

Burst-enabling a media player allows it to request and receive bursted data in a Burstware deployment. To burst-enable a media player, you install a Burstware Bridge on the same machine as the player.

You can also install the Burstware Bridge Monitor, a client application that monitors a local Burstware Bridge. The Burstware Bridge Monitor displays information about media file delivery, such as how much data the server has delivered to the player and how much of that data has been played, as well as information about network conditions. This monitoring tool is an optional component of a Burstware deployment.

Installing the Burstware Bridge

The Burstware Bridges are provided as self-extracting executables on the Burstware installation CD. To install the Burstware Bridge:

1. Locate the appropriate executable file for your installation.
 - For the Windows Media Player bridge:
Burstware/windows/webinstall/wmp_download/BurstWMP.exe
 - For the Apple QuickTime Player for Windows bridge:
Burstware/windows/webinstall/quicktime_download/BurstQTP.exe
2. Double-click its icon to begin the installation.
3. Click OK to complete the installation.

NOTE: You can set up a Web page that will download the bridge and install it for end users, if they agree to the installation. See [Setting up Auto-Install for the Burstware Bridge](#), on page 23 for more information.

Tailoring the Configuration of Burst-Enabled Players

A burst-enabled player behaves according to Burstware-specific configuration parameters. These parameters control a variety of player behaviors such as the Burstware buffer configuration, failover, and media play rate. The parameters can be set in a web page that has an embedded player—in the play request URL—or on individual machines.

When you install a Burstware Bridge, default values are assigned to these parameters. The bridge is fully functional with the default parameter settings. However, there are certain scenarios in which setting parameters to values other than their defaults could optimize video delivery in your Burstware deployment. For a discussion of the player parameters, refer to Chapter 8 of *Burstware User Guide*.

NOTE: For Apple QuickTime Player for Windows, we recommend you set the `BackBufferSize` parameter in the play request URL for reasons explained in the Chapter 8 of *Burstware User Guide*.

Installing the Burstware Bridge Monitor

The Burstware Bridge Monitor, an optional component in a Burstware deployment, is provided as a self-extracting executable file—called **BridgeMon.exe**—in the Burstware/windows/webinstall directory of your Burstware CD.



To install from **BurstMon.exe**:

1. Double-click the **BurstMon.exe** icon.
2. Click OK to complete the installation.

See Chapter 9 of *Burstware User Guide* for information about using the Burstware Bridge Monitor.

Accessing Media Files with the Burst-Enabled Player

You are now ready to access multimedia content using your standalone burst-enabled player.

1. Start the media player.
2. Select the File > Open or File > Open URL menu command.
3. Type in the play request URL:

```
burst://conductor_name/media_file_name?mediaplayrate=rate
```

where:

- ◆ “burst:” is a protocol specifier
- ◆ “conductor_name” specifies the machine and port number where the Burstware Conductor is installed. The machine is identified by a host name or an IP address.
- ◆ “media_file_name” is the media file name
- ◆ “mediaplayrate” is the encoded bit rate of the content to be viewed. It is important, in order to provide end users with the highest quality viewing experience, to correctly specify the encoded bit rate of the media file.

Here is a sample URL:

```
burst://conductor1:8018/phantom.asf?mediaplayrate=300
```

Embedding a Media Player in a Web Page

By embedding a media player in a web page, you can integrate multimedia in your web-based application and reduce the end user effort required to play a media file. The code that embeds the media player specifies the media file’s URL and encoded bit rate, and sets options that control the behavior of the player.

Embedding Apple QuickTime Player for Windows

Embedding a burst-enabled Apple QuickTime Player for Windows in a web page requires the use of a “reference movie” in order to interpret the “burst://” portion of the URL. See Chapter 7, “Burst-Enabling Players” for more information.

Embedding Windows Media Player

The sample HTML provided in the webinstall directory on the Burstware installation CD—**burstwmp1.html**—includes code for embedding a burst-enabled Windows Media Player in a web page. The contents of **burstwmp1.html** are shown in [Figure 2](#), on [page 23](#).



Syntax requirements for embedding a player and for identifying the file to be played vary between Internet Explorer and Netscape Navigator. The code in [Figure 2](#) works for both Internet Explorer and Netscape Navigator—player options and the file URL are specified in two different places in `burstwmp1.html`.

If you incorporate the sample code in a web page of your own, change the URL to point to one of your own media files. Make this change to the OBJECT tag for Internet Explorer, and to the EMBED tag for Netscape Navigator, as described below:

- Internet Explorer—Specify the conductor list and media file in the **FileName** parameter of the OBJECT tag, as shown below:

```
<PARAM NAME="FileName" VALUE="burst://conductor1:8018/phantom.asf?mediaplayrate=300">
```

- Netscape Navigator—Specify the conductor list and media file in the URL of the EMBED tag, as shown below:

```
FileName = "\\burst://conductor1:8018/phantom.asf?mediaplayrate=300&metafile=.burst"
```

The two backslashes preceding “burst” and the “metafile=.burst” string are required because of the Netscape Plug-in architecture.

NOTE: To ensure the highest quality viewing and listening experience, set `MediaPlayRate` to the average encoded rate—also known as “play rate”—of the video or audio file.

After setting up the Web page with the embedded media player, verify it locally in your browser to ensure that it works correctly, and that the file you request is successfully served. Then, add the web page to your web site to make it available to end users.

Any existing web pages you have that embed a supported media player can be burst-enabled by editing the URLs, as described above.



Figure 2: Code sample for embedding WMP in IE or Netscape

```

<HTML>
<HEAD>
<TITLE> Burstware - Simple embedding of the Burst-Enabled Windows Media
Player</TITLE>
</HEAD>
<BODY>
<P>
<OBJECT classid=CLSID:22d6f312-b0f6-11d0-94ab-0080c74c7e95
codeBase=http://activex.microsoft.com/activex/controls/mpplayer/en/
nsmpl2inf.cab#Version=6,0,0,0
height=280 id=BurstPlay type=application/x-oleobject width=360 VIEWASTEXT
standby="Loading Microsoft Windows Media Player components...">
<PARAM NAME="AutoStart" VALUE="1">
<PARAM name="ShowStatusBar" value="1">
<PARAM NAME="FileName" VALUE="burst://yadda.burst.com:8038/ ←
phantom.asf?MediaPlayRate=300">
<PARAM NAME="ShowControls" VALUE="1">
<EMBED type="application/x-mplayer2"
pluginspage="http://www.microsoft.com/windows95/downloads/contents/
wurecommended/s_wufeatured/mediaplayer/default.asp"
name="BurstPlay"
width=352
Height=315
ShowControls = 1
ShowStatusBar = 1
AutoStart = 1
FileName = "\\burst://yadda.burst.com:8038/ ←
phantom.asf?MediaPlayRate=300&metafile=.burst"
</EMBED>
</OBJECT>
</BODY>
</HTML>

```

Setting up Auto-Install for the Burstware Bridge

You can set up a web page so that when a browser reads it, the browser checks for the existence of a Burstware Bridge installation on the player machine. If either no bridge or an outdated version of a bridge is currently installed, upon user confirmation the page will download and install the bridge.

The components to be downloaded to the client are packaged—in a cabinet (.cab) file for Internet Explorer, and in a java archive (.jar) for Netscape Navigator—so that the browser can download them dynamically.

Different versions of the components are provided for Microsoft WMP and for Apple QuickTime for Windows:

- **BurstWMP.cab**—Components for WMP on Internet Explorer
- **BurstQTP.cab**—Components for QTP on Internet Explorer



- **BurstWMP.jar**—Components for WMP on Netscape Navigator
- **BurstQTP.jar**—Components for QTP on Netscape Navigator

Auto-Install for Internet Explorer

In the web page that performs the Internet component download for Internet Explorer, you use the OBJECT tag to reference **BurstWMP.cab** or **BurstQTP.cab**. When an end user opens the web page, the browser reads the OBJECT tag and retrieves the files necessary for the download.

To set up your web page to perform an Internet component download:

1. Copy the appropriate .cab file, from either the `webinstall/wmp_download` or `webinstall/quicktime_download` directory on the Burstware CD, into the directory on your web server that contains the HTML page that will perform the download.
2. Include the relevant HTML code sample below in the HTML page performing the download. Files containing code samples for Windows Media Player and Apple QuickTime Player for Windows— **BurstWMPInstall.html** and **BurstQTPInstall.html**, respectively—are provided in the `webinstall` directory on the Burstware CD. The contents of these files are shown in [Figure 3](#) and [Figure 4](#).

Figure 3: Code sample for auto-install of WMP on IE

```
<OBJECT ID="BurstSourceFilter"
CODEBASE="BurstWMP.cab#version=2,0,0,0"
classid="CLSID:3E149130-1B20-11D3-97A8-00A0CC2274C2"
WIDTH=1
HEIGHT=1>
</OBJECT>
```

Figure 4: Code sample for auto-install of QTP on IE

```
<OBJECT ID="BurstSourceFilter"
CODEBASE="BurstQTP.cab#version=2,0,0,0"
classid="CLSID:3E149130-1B20-11D3-97A8-00A0CC2274C2"
WIDTH=1
HEIGHT=1>
</OBJECT>
```

Notes about the Auto-Install Code for IE

These notes pertain to the code samples in [Figure 3](#) and [Figure 4](#).



CODEBASE Parameter

The **CODEBASE** parameter provides a URL for the .cab file to download, and specifies the version number of the control it contains.

When the end user loads the page with this code in it, Internet Explorer checks to see whether the player machine already has the Burstware Bridge installed, and if so, whether the version is greater than or equal to the version specified in the **CODEBASE** parameter. If the bridge is not installed, or if the version of the bridge currently installed is older than the version specified in the **CODEBASE** parameter on the web page, Internet Explorer:

1. Prompts the user to approve the download and installation of the bridge.
2. Downloads the Burstware Bridge software from the .cab file and installs it.

Version Strings Compared

If a Burstware Bridge is already installed on the player machine, Internet Explorer compares the existing bridge's version number with the version number in the auto-install code, in the "version=" string. Internet Explorer performs the download only if the version number of the bridge currently on the player machine is less than the version number in the auto-install code.

NOTE: Web developers must be aware that if they update the Burstware Bridge version available on the page for download, they must also change the version number in the CODEBASE parameter in the web page code to match it. A technote on this topic, "Updating Your Environment to Let End Users Auto-Install a New Burstware Bridge Version" is available on the Burst.Com web site.

Auto-Install for Netscape Navigator

In the web page that performs the automatic install for Netscape Navigator, you reference the .jar file and include a JavaScript function that verifies that the player machine has at least the same version of the Burstware Bridge referenced in the auto-install code. When the end user opens this web page, the JavaScript function is called and, if necessary, the latest version of the bridge is automatically installed from the .jar file.

To set up your web page to perform an automatic install:

1. Copy the appropriate .jar file, from either the `webinstall/wmp_download` or `webinstall/quicktime_download` directory on the Burstware CD, into the directory on your web server that contains the HTML page that will perform the download.
2. Include the appropriate HTML and JavaScript code in the HTML page performing the download.
 - For Windows Media Player, use the code in **BurstWMPInstall.html**, from the **webinstall** directory on the Burstware installation CD-ROM.
 - For Apple QuickTime Player for Windows, use the code in **BurstQTPIInstall.html**, from the **webinstall** directory on the Burstware installation CD-ROM.

The contents of these files are shown in **Figure 5** and **Figure 6**, on **page 26**.

3. Edit the `trigger.ConditionalSoftwareUpdate` command to correctly specify the URL of the .jar file, including the full path to the JAR file. For example:

```
http://www.burst.com/support/h/BurstWMP.jar
```



Figure 5: Code sample for WMP Netscape Navigator auto-install

```
trigger.ConditionalSoftwareUpdate(
"http://your_web_server/BurstWMP.jar",
"/Burst/WMPBridge",
vi, trigger.DEFAULT_MODE);
```

Figure 6: Code sample for QTP Netscape Navigator auto-install

```
trigger.ConditionalSoftwareUpdate(
"http://your_web_server/BurstQTP.jar",
"/Burst/QTPBridge",
vi, trigger.DEFAULT_MODE);
```

Expanding Your Burstware Deployment

This section provides guidelines for expanding your Burstware deployment to a second machine. Instructions are provided for installing a backup conductor and another available server on the second machine. (For a discussion of the difference between an available and a standby server, see Chapter 3 of *Burstware User Guide*.)

NOTE: Your license agreement must allow the installation of at least 2 conductors and 2 servers.

1. Select a machine for the installation.
 - Review [Chapter 4, Quick Start System Requirements](#), if necessary.
2. Install a conductor and server on the second machine.
 - Follow the instructions in the section, [Installing on Windows NT or Windows 2000, on page 14](#) or [Installing on Linux or Solaris, on page 16](#), as appropriate. Note the following differences in the installation process:
 - When defining the server list for the conductor installation, include both Machine 1 and Machine 2 in the list
 - When defining the managed bandwidth for the server installation, assign half of your total managed bandwidth to the server
3. Modify the Burstware initialization files for Machine 1—where you installed your first conductor and server.
 - Add Machine 2 to the `serverList` parameter in `burstconductor.ini`
 - Reduce the value for managed bandwidth in `burstserver.ini` by half, because the servers on Machine 1 and Machine 2 will be sharing the total managed bandwidth.
4. Start up a conductor and server on each machine.
5. Verify communications between Burstware components.



To verify that each conductor sees two servers, choose the Monitoring tab from the Burstware Conductor GUI. Check that the value in the Servers Available field is “2”.

To verify that each server sees two conductors, choose the Monitoring tab from the Burstware Server GUI. Check that the value in the Conductors Connected field is “2”.

6. Modify web pages with embedded players to reference the standby conductor.

If you have web pages with embedded, burst-enabled media players, you must update the play request URLs in those web pages to include the Machine 2 conductor in the conductor list. Remember to separate multiple conductors in the list by semi-colons, as shown below:

```
<PARAM NAME="FileName" VALUE="burst://  
conductor1:8018;conductor2:8018/  
phantom.asf?mediaplayrate=300">
```

