

BOSâNOVA XTC

System Administrator's Guide



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Your feedback is valuable.

If you have questions or suggestions regarding this document—number MM3017-04, printed December 2004—please forward them to the B.O.S. Technical Communication department at: dlevy@boscom.com

Contact Information:

BOSâNOVA, Inc., North America

Tel: (866) 865-5250; (623) 516-0029 Email: sales@bosanova.net
(866) 864-5250 (support) support@bosanova.net
Fax: (623) 516-8697

BOSâNOVA, Inc., France

Tel: +33-1-53-14-59-80 Email: sales@bosanova.fr
Fax: +33-1-53-14-01-74 support@bosanova.fr

BOScom, Israel

Tel: +972-4-990-7555 Email: support@boscom.com
Fax: +972-4-999-0334 sales@boscom.com

Web site: <http://www.bosanovathinclient.com>

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SECTION 2: BOSÂNOVA TCP/IP CONFIGURATION AND ADMINISTRATION

BOSÂNOVA TCP/IP includes several modules or components to help you configure, administer, and customize the software. These are:

- **The Administrator**
Use to set and maintain overall parameters, see p. 39
- **The TCP/IP Configurator**
Use to define the TCP/IP connection, proxy servers, and ports, see p. 42
- **The Emulation Configurator**
Use to define emulation sessions, see p. 43
- **The BOSÂNOVA Emulation**
The environment in which you run your host applications, see p. 45
- Keyboard Customization, see p. 56
- Toolbar Customization, see p. 63
- Hotkey Customization, see p. 67
- MorphExpress
An tool that converts your host screen into a GUI screen, see p. 68
- Printer Driver Editor
Use to customize the printer driver, see p. 70
- Data Transfer Function
A 32-bit Windows utility for transferring data in either direction between a PC and a host, see p. 72
- Host Explorer
View your AS/400 as if it were another drive on your PC, see p. 76
- Remote Command
Send an AS/400 CL command to a host system from a PC, see p. 78

BOSâNOVA TCP/IP DESCRIPTION

BOSâNOVA TCP/IP combines B.O.S. TN5250E display emulation with DTF software in a package that is specifically designed for direct BOSâNOVA XTC-to-AS/400 or iSeries connectivity.

BOSâNOVA TCP/IP includes the following program modules:

- Display/Printer Emulation provides TN5250E display and printer emulation
- Management Module—installed from the CD-ROM onto the server—enables centralized management of multiple stations within a BOSâNOVA TCP/IP network
- Printer Driver Editor enables you to customize the printer driver
- DTF (Data Transfer Functions) is a 32-bit Windows utility for transferring data between a BOSâNOVA XTC and its host
- Host Explorer, a utility for viewing your AS/400 or iSeries as if it were a drive on your BOSâNOVA XTC

BOSâNOVA TCP/IP Features


- supports up to 32 simultaneous display and/or printer emulation sessions
- includes MorphExpress for converting host screens to true GUI screens without changing the host application
- supports Text Assist
- supports 3477FC devices (132-column display with color)
- supports PC and Terminal styles for keyboards, allowing you to work with either a 101/102-key keyboard or the B.O.S. 122-key keyboard
- supports the Euro symbol
- includes comprehensive keyboard mapping and customization, using Shift, Caps Lock, Alt, Ctrl, function keys, etc.
- includes Print Preview, which displays print output before sending the print job to the physical printer
- includes Printer Session Properties, for modifying printer session settings
- includes customizable “floating” toolbars and Internet Explorer-type toolbar buttons
- supports user-definable macros
- includes BOSâNOVA EHLLAPI/DDE Interface 32, which sets a standard IBM EHLLAPI-style interface for enhancing interaction between host sessions and Windows applications

THE ADMINISTRATOR

The Administrator provides an overall view of various parameters relating to your installation of BOSâNOVA TCP/IP. The Administrator also enables you to run certain administrative procedures.

Opening the Administrator

To open the Administrator:

1. Click the Windows Start button.
2. Select **Programs** ➤ **BOSâNOVA TCP/IP**.
3. Select  Administrator .

The top pane of the Administrator uses a Windows-style tree structure to display the parameters and installed modules. To use this structure:

- An item preceded by a **plus sign (+)** contains nested items. Click the plus sign to expand the item (display the nested folders).
- An item preceded by a **minus sign (-)** is already fully expanded. Click the minus sign to collapse that part of the tree.
- Names of parameter sets appear in black, while the current status values appear in blue. Values always appear in arrow brackets (< >).
- When you select a parameter set or installed module in the top pane, the buttons and controls that configure or run that parameter set or module appear in the bottom pane.

Installation Parameters

When Installation Parameters, in the top pane of the Administrator, is expanded, the following parameters are displayed:

Product Version

The installed version of BOSâNOVA TCP/IP. Technical Support ask for this number if you contact them for help.

Installation Type

Standalone for BOSâNOVA Thin Client.

Installation Path

The path to which BOSâNOVA TCP/IP is installed.

Installation Set

The set number.

Product ID

The BOSâNOVA TCP/IP product ID. Technical Support will ask for this number if you contact them for help.

Administrative Parameters

When Administrative Parameters in the top pane of the Administrator is expanded, the following parameters are displayed:

Host Language/Country

The host keyboard ID (language), the host EBCDIC code page used, and the EBCDIC/ASCII translation table that is used. These values were defined when you installed BOSÂNOVA TCP/IP.

License

Displays the license type.

Euro Support

The euro is the single currency of the European Monetary Union that was adopted by 11 member states on 1 January 1999. If you select this option and your Windows system and the host are set to support the euro symbol, BOSÂNOVA TCP/IP uses new euro symbol-compliant keyboard type and code page IDs when allocating a session and new EBCDIC/ANSI and ANSI/EBCDIC tables with euro symbol support. If your host or Windows system do not support the euro symbol, do *not* select this checkbox. See “Euro Symbol Support” on page 70 for details on system requirements, changes, and patches.

Connectivity

When Connectivity, in the top pane of the Administrator, is expanded, the following parameter is displayed:

Connection Type

TCP/IP

Run

(This button is disabled for the TCP/IP connection type.)

Configure

Click to open the TCP/IP Configurator to configure the connection.

Installed Modules

When Installed Modules, in the top pane of the Administrator, is expanded, all currently installed BOSâNOVA TCP/IP components are displayed:

Display/Printer Emulation

5250 display and printer emulation.

DTF

DTF (Data Transfer Functions) is a 32-bit Windows utility for transferring data between a BOSâNOVA XTC and its host. (See “DTF (Data Transfer Function)” on page 72.)

Host Explorer

Host Explorer allows viewing your AS/400 as if it were a drive on your BOSâNOVA XTC. (See “Host Explorer” on page 76.)

Run

Click this button in the bottom pane to run:

- the emulation (if you chose Display/Printer Emulation)
- DTF
- Host Explorer

Configure

Click this button in the bottom pane to configure the selected module: emulation or TCP/IP connection.

Diagnostics

If you contact Technical Support with a problem, they may ask you to provide them with special files to help them solve it. This process is explained in “Traces and Screen Captures” on page 80.

Expand Diagnostics in the Administrator display tree to display the following parameter:

- **Troubleshooting Information**

Click **Collect Technical Information** to open the User Information dialog box; fill in the information requested to create the information file (default Bsinfo.bts).



You must close all sessions before accessing Diagnostics.

THE TCP/IP CONFIGURATOR

Use the TCP/IP Configurator to configure parameters for your BOSâNOVA XTC to host communication. The TCP/IP Configurator opens automatically when you start BOSâNOVA TCP/IP. You can access it any time to change parameters.

Starting the TCP/IP Configurator

1. Close all sessions and run the Administrator.
2. Expand **Connectivity** in the top pane and click **Connection Type**.
3. In the bottom pane, click **Configure** to open the TCP/IP Configurator.
4. Set the parameters and click **OK** until you exit the Administrator.

Using the TCP/IP Configurator

Configurator parameters are divided among the following two tabs:

- **Basic**
Add, modify, or delete host systems and define security parameters. For details, see *TCP/IP Configurator* in online Help.
- **Advanced**
Define or enable the proxy servers (Telnet, SOCKS, and FTP), LDP ports, Keep Alive Mode, and Management Module parameters.

The **top pane** of the Advanced Tab uses a Windows-style tree structure to display the parameters. To use this structure:

- An item preceded by a **plus sign (+)** contains nested items. Click the plus sign to expand the item (display the nested folders).
- An item preceded by a **minus sign (-)** is already fully expanded. Click the minus sign to collapse that part of the tree.
- The names of the parameter sets appear in black, while the current status values appear in blue. Values always appear in arrow brackets (<>). When you change a parameter, it appears in red until you click **OK**.
- When you **select** a parameter set in the top pane, the buttons and controls that configure or run that parameter set appear in the **bottom pane**.

Select a proxy server in the top pane and use the dialog box that appears in the bottom pane to define or modify the connection. For details, see *TCP/IP Configurator* in online Help.


THE EMULATION CONFIGURATOR


Use the Emulation Configurator to change the parameters that control the look and operation of the BOSâNOVA TCP/IP emulation and to define sessions.



*You can access the Emulation Configurator while the emulation is running, but you can **not** add or change sessions while sessions are open.*

Starting the Emulation Configurator

When the Emulation is closed, from the Start Menu, select **Programs** ➤ **BOSâNOVA TCP/IP** and select  **BOSâNOVA Configurator**. From the Emulation

- Click  from the emulation toolbar, or
- Select **File** ➤ **Run Configurator** from the emulation menu bar.

Using the Emulation Configurator

Configurator parameters are divided among two tabs, Sessions and Advanced Properties:

Sessions Tab

For adding, modifying, or deleting display and printer emulation sessions. See *The Emulation Configurator* in online Help for details.

Advanced Properties Tab

For adding, modifying, or deleting display and printer emulation sessions, as well as defining sets of global parameters.

The **top pane** of the tab uses a Windows-style tree structure to display the number and type of currently-defined sessions and the sets of global parameters affecting all the sessions.

The parameter sets are divided into the following categories (see *Advanced Properties* in online Help for details):

- **Sessions**
Settings for all defined display and printer sessions.
- **Keyboard**
For setting the keyboard type and viewing or customizing keyboard mapping and other settings.
- **Mouse**
For defining mouse actions.

- **Sign-on Screen**
For defining any automatic startup or macro action.
- **MorphExpress**
For defining the GUI display.
- **Display Properties**
For defining the color and cursor style.
- **Session Preferences**
For defining the display font and ruler type.
- **Options**
For setting various emulation options.

Diagnositics

If you contact Technical Support with a problem, they may ask you to provide them with special files to help them solve it. This process is explained in “Traces and Screen Captures” on page 80.

Expand Diagnostics in the Administrator display tree to display the following parameter:

- **Troubleshooting Information**
Click **Collect Technical Information** to open the User Information dialog box; fill in the information requested to create the information file (default Bsinfo.bts).




You must close all sessions before running Diagnostics.

THE BOSÂNOVA EMULATION

The BOSÂNOVA emulation is the environment in which you run your host applications. The host application appears in a window with optional toolbars, the BOSÂNOVA TCP/IP menu bar, customizable macros, and customizable display enhancements.

Starting BOSÂNOVA TCP/IP



To start BOSÂNOVA TCP/IP:

1. Click **Start**.
2. Select **Programs** ➤ **BOSÂNOVA TCP/IP**.
3. Select  **BOSÂNOVA Emulation**

In addition, you can start BOSÂNOVA TCP/IP automatically by adding it to the Windows Startup folder. To do this, place a shortcut to the BOSÂNOVA TCP/IP Display Emulation (Bsmdemul.exe in your BOSÂNOVA TCP/IP folder) in your Startup folder (Start Menu ➤ Programs ➤ StartUp).

Opening a Display or Printer Emulation Session

After starting BOSÂNOVA TCP/IP, to begin working, open a display session or printer session:

- Click the desired icon.
 - The icon:  indicates a display session.
 - The icon:  indicates a printer session.
- Select **Sessions** ➤ **Activate Session** and select the desired session.
- Select **Sessions** ➤ **Activate All** to activate all sessions.
- If you selected **File** ➤ **Save Workspace** the last time you closed BOSÂNOVA TCP/IP, then you can select **File** ➤ **Restore Workspace** to automatically reopen all sessions.



*All defined sessions that are not currently open are listed according to session name in **Session** ➤ **Activate Sessions**. A session with no session name defined is listed by its number and device model type; for example, **Session_2 3477**.*

Display Emulation Sessions

A truncated image of a display emulation screen is shown below:

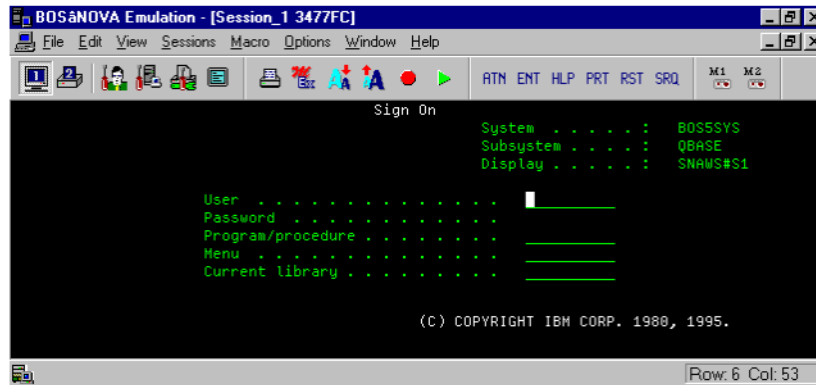



















Figure 3: BOS&NOVA Display Emulation Session

Display Emulation Toolbar Buttons

	Shows the active emulation session (when selected).
	Shows the active printer session (when selected).
	Runs the Administrator.
	Runs the Emulation Configurator.
	Displays Print Screen setup.
	Toggles between a normal display screen and full-screen mode. In full-screen mode, the display screen appears larger and without the Windows menu, status, and task bars.
	Places a tab after each line of text in the Windows clipboard. This is useful for pasting text into host fields because the tab causes the next line to be pasted into the next input field.

	<p>Copies each line within the screen or selected area as a single line with a carriage return. When pasted back into an emulation screen, the individual lines can then be entered into host fields by selecting Edit > Paste Tab or Edit > Paste Field Exit.</p>
	<p>Performs a Print Screen.</p>
	<p>Runs the emulation session in GUI mode (MorphExpress), which display menus, buttons, frames, tables and other Windows interface features.</p>
	<p>Decreases the font size in the active display session.</p>
	<p>Increases the font size in the active display session. The font is increased in height first, then in width. If you are using Autosize Font (Options > Preferences in the Emulation Configurator), clicking this button changes the minimum font size.</p>
	<p>Records a macro: everything entered at the keyboard (characters, symbols, or command keys) is recorded. Recording continues until the macro is stopped.</p> <p>Note! <i>While you are recording, a two-button toolbar displays Pause and Stop buttons.</i></p> 
	<p>Plays the selected pre-recorded macro.</p>
	<p>Host operations toolbar functions.</p>
	<p>Macro toolbar. These only appear if macros are defined.</p>

Printer Emulation Sessions

BOSâNOVA TCP/IP uses a Windows-style tree structure to display printer sessions and their status information. The following diagram shows a sample printer session status screen.



If a parameter is not applicable to your connection type, it appears blank.

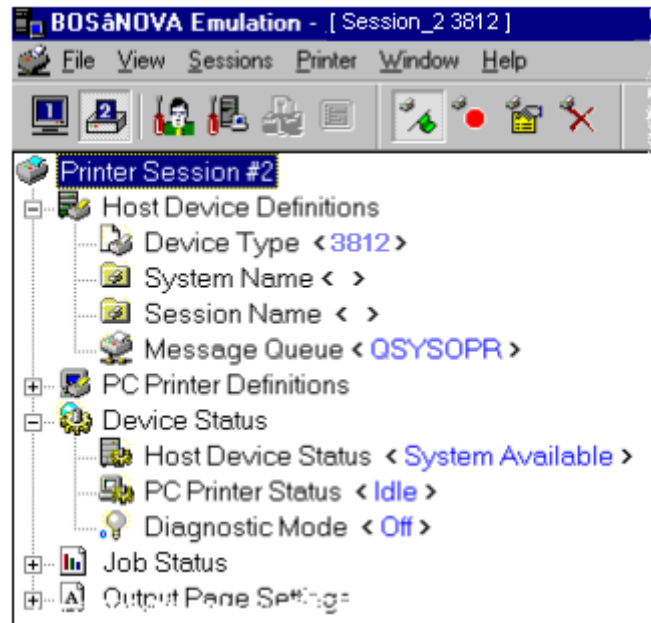











Figure 4: BOSâNOVA Printer Emulation Session


Printer Emulation Toolbar Buttons

	Shows the active emulation session (when selected).
	Shows the active printer session (when selected).
	Runs the Administrator.
	Runs the Emulation Configurator.
	Displays Print Screen setup.

	Starts the printer. If the print queue has been paused or stopped, this resumes printing.
	Stops the printer, including any jobs currently in the print queue. A host error message will appear, indicating that the print queue has been stopped. Jobs in the queue remain there; ready jobs are re-released once the Start button is pressed or Printer > Start is selected.
	Opens Printer Session Properties, for viewing or setting print job parameters.
	Cancels the current job in the print queue. Other jobs will continue.

Accessing Printer Session Properties

You cannot change values directly on the screen. Make changes in the Printer Session Properties dialog box. Access the dialog box in one of three ways:

- In a print emulation screen, right-click to display the popup menu and select **Properties**.
- From the print emulation menu bar, select **Printer > Properties**
- From the printer emulation toolbar, click 

General Tab

This tab contains parameters defining the printer driver and job timeout settings.

- **Print Test Page**
Sends a test page to the local printer. The print session emulates a host print device, but the output is directed to a PC printer.
- **Printer Driver**
BOSâNOVA TCP/IP enables you to print using your default Windows printer driver or to bypass Windows printing by defining your own custom printer driver.
- **Timeout Settings**
The default job timeout is 10 seconds. This is the maximum amount of time that can elapse between buffers received from the host. If no buffer is received within this time period, BOSâNOVA TCP/IP assumes that the end of the print job has occurred. During troubleshooting, you

may need to increase this number. To restore the default value, click **Set Default Timeout**.

Previous Job Attributes Tab

Displays the attribute values of the most recent host print job in the left pane and corresponding local printer settings (converted from the host attributes by the BOSâNOVA printer emulation) in the right pane. For details, see *Printer Session Properties* in online Help.

Page Setup Tab

For setting parameters such as CPI, LPI, page orientation, paper size, and paper source. For details, see *Printer Session Properties* in online Help.



If your screen display is not clear, click the + or – box in front of an entry several times to refresh the screen.

Diagnostics

Contains parameters for running diagnostic mode. This is for troubleshooting print problems. For details, see “Traces and Screen Captures” on page 80.

Page Setup Tab

See *Printer Session Properties* in online Help for more information.



If your screen display is not clear, click the + or – box in front of an entry several times to refresh the screen.

Custom Driver Considerations

In order to decide whether to use the default Windows driver or a custom driver, you must understand how BOSâNOVA TCP/IP handles print jobs.



When using the Windows driver, a data buffer (ASCII or EBCDIC) arrives at the Windows driver. It is then output as a graphics buffer to the printer queue. Each output buffer is approximately 40K.

When using a custom driver, a data buffer arrives at the custom driver. It is then output as the same strings (ASCII or EBCDIC) plus commands for that printer driver. This output is then routed to the Windows driver, where it again is output to the printer queue as data strings plus printer commands. Because no graphic processing is involved, each buffer is approximately 3K.

If you are printing straight ASCII text, for example, and require speed and high throughput, you might consider using a custom driver. Custom drivers can be modified using the Printer Driver Editor.

Copying Between Sessions or Applications

Most Windows applications use the Windows Clipboard to transport text, graphics, and other data. You can also use the Clipboard to copy data from a session into another session or another application.

1. In an active display emulation session, use the mouse to mark the on-screen text you want to copy.
2. To copy:
 - select one of the copy methods from the Edit menu (Copy Continuous, Copy by Line, or Copy Bitmap), or
 - press <Ctrl+C>, or
 - click  on the toolbar.
3. If you are copying to a different session or application, switch to the other session or application.
4. Before pasting the copied text, use the mouse to position the cursor at the insertion point.
5. To paste:
 - select one of the paste methods from the Edit menu (Paste Continuous, Paste Tab, or Paste Field Exit), or
 - press <Ctrl+V>, or
 - click  on the toolbar.





The data copied into the Windows Clipboard will remain there until replaced by the next copy action.

Switching Between Emulation Sessions

You can switch (or toggle) between open display and printer emulation sessions using the toolbar, the menu bar, or the keyboard.

From the Toolbar

Click the display session button (for example, ) or the printer session button (for example, ) to switch to that session.

From the Menu Bar

Select the Window menu. The bottom of the menu lists all the open display and printer emulation sessions. A check appears next to the currently-active session (on top session). You can switch to another session by selecting it from this list.

From the Keyboard

In Windows, press <Ctrl>+<F6> or <Ctrl>+<Tab> to switch to the next open emulation session.

- Press the mapped PC key for “Jump to Next Session” (default <Alt>+<PageUp>).
- You can remap this key in the Mapping Editor. (See “Customizing the Emulation Keyboard” on page 56.)
- Set the Session Toggle Key Combination:
 - i. From the menu bar, select **Options** > **Keyboard Customization**.
 - ii. Under Session Toggle Key Combination, select **No key** (for no toggle key combination) or <Alt+Num> or <Ctrl+Num>.
 - iii. Check that Num Lock is on.
 - iv. To switch to another session, press Alt or Ctrl (depending which combination you selected in step 2) and press the session number on the numeric keypad. The session changes when you release both keys.

Using Macros


Macros are strings of keystrokes (characters, symbols, or command keys) entered at the keyboard and saved for repeated use. They provide a simple way to enter repetitive command data into a host session screen. Macros are stored in the Windows Registry.




You will not be able to use macros from another B.O.S. emulation product; you must re-record the desired macros in BOSâNOVA TCP/IP.

Recording a Macro

To record a macro, you must be in a display emulation session (see “Opening a Display or Printer Emulation Session” on page 45).

1. Click  from the toolbar or select **Macro** ➤ **Record Macro**. A popup Record toolbar appears containing the Pause and Stop buttons.



2. Stop recording by clicking  or selecting **Macro** ➤ **Stop Macro**. The Record popup toolbar closes.



*If you exit the emulation before clicking **Stop Macro**, the recorded key sequences are lost.*

3. The Save Macro As dialog box appears. Enter a name for the macro and click **Save**.



If you record a macro with a key sequence that is already in use, the new key sequence automatically replaces the existing one.

Viewing a Macro



1. Select **Macro** ➤ **Macro Organizer**. The Macro Organizer opens.
2. Select a macro from the list and click **View** to open the Macro Viewer. The macro appears as commands and text strings.
3. When you have finished viewing, click **Close**.

Playing a Macro



To play a macro, you must be in a display emulation session.

There are two ways to play macros from the Sessions toolbar:

- | | |
|--|--|
| <ol style="list-style-type: none">1. Click . The Macro Organizer player window opens.2. Click a macro. The macro plays and the Macro Organizer window remains <i>open</i>. | <ol style="list-style-type: none">1. Click . A list of macros is displayed.2. Click a macro. The macro plays and the list <i>closes</i>. |
|--|--|

To play macros from the Macro menu:

- a. Select **Macro** ➤ **Play Macro**. A list of all defined macros is displayed.
- b. Select a macro from the list.

To play macros from the Macros toolbar, click the desired macro button.



Deleting a Macro

1. Select **Macro** ➤ **Macro Organizer**. The Macros Organizer opens.
2. Select a macro from the list and click **Remove**.
3. Confirm the delete action by clicking **Yes**.
4. Select another macro to delete, or click **Close** to close the dialog box.


The Macro Organizer and Macro Editor

With the Macro Organizer, you can manage and modify recorded macros in an easy-to-use interface. The Macro Organizer interface displays a list of existing macros on the left side and buttons for managing the macros on the right side.

The Macro Editor provides a convenient way for adding, removing, or substituting macro commands or text strings in a selected macro. The Macro Editor displays the text strings and commands of the selected macro in the order they were recorded or entered in the Macro Organizer. For details, refer to online Help.

Closing a Session

To close a session:

- close the session window by clicking the Close button () at the far right of the title bar, or
- select **Sessions** ➤ **Close Session** and select the desired session


To close all sessions, select **File** ➤ **Exit** to close BOSâNOVA TCP/IP.



All open sessions appear in the Close Session cascade menu and are listed according to session name. A session with no session name defined is listed by its number and device model type; for example, Session_2 3477.

Stopping an Emulation Session

When you close the BOSâNOVA emulation, all sessions will be closed. To do this:

- Select **File** ➤ **Exit**, or
- Click  on the window title bar.



*If you log out of the host session without closing your host application, the session may remain active at the host side even if BOSâNOVA TCP/IP is closed. To prevent this, select **Check for sign-on screen on exit** in Sign-on Screen in the Advanced Properties tab in the Emulation Configurator. This displays a warning if you try to close a session when the host Sign-on screen is not the current screen.*

CUSTOMIZING the EMULATION KEYBOARD

Accessing Keyboard Customization

- From an emulation session, select **Options** ➤ **Keyboard Customization** from the emulation menu bar.
- From the Administrator:
 - a. In the top pane, select **Installed Modules** ➤ **Display Emulation**; in the bottom pane, click **Configure**.
 - b. Select the **Advanced Properties** tab. In the top pane, select **Keyboard**; in the bottom pane, click **Keyboard Customization**.

Customizing Your Keyboard

1. From the Advanced Properties tab in the Emulation Configurator, select **Keyboard**.
2. In Keyboard style, select **Terminal** or **PC** (that is, the style of the keyboard you use).
3. In Keyboard type, select the keyboard you are using from the list: BOS 122-key, B.O.S. 122 PC or the standard 101/102-key keyboard. (If you are using the BOS 122-key keyboard, you must install its driver.) The B.O.S. 122 PC keyboard does not require installation of a driver.
4. To view the default keyboard settings, click **Keyboard Customization** (for details, see *Keyboard Customization* in online Help).



If the default keyboard settings are appropriate, which is the case for most users, go to step 6 (to check host settings). If, however, you want to change these settings, continue with step 5.

5. To change the default keyboard settings, set the following parameters (for details, see *Keyboard Customization* in online Help):

Keyboard Mapping Name

The only three PC keyboard options on the list are BOS 122-key, B.O.S. 122 PC and the standard 101/102-key keyboard. Select the type of keyboard you have.



*The following parameters apply to **all** the keyboard mappings in the list; therefore, if you change a parameter, it changes in all the listed keyboard mappings, not just the selected one.*

Keyboard Locks

You can override these default Terminal or PC-style keyboard mappings:

- Select **Shift Lock or Caps Lock**. On a terminal-style keyboard, <Caps Lock> works like a terminal <Shift Lock> and remains in place until the <Shift> key is pressed
- **Set Num Lock at session startup**: when selected, this sets <Num Lock> when you open a session. On a terminal-style keyboard, the numeric keypad is always numeric whether or not <Num Lock> is selected.

Enter and Field Exit

Select the keystrokes for Enter and Field Exit. There are two choices:

- <Field exit>=Enter; <Enter>=Right Ctrl (terminal-style keyboard defaults)
- <Field exit>=Right Ctrl; <Enter>=Enter

Word Processor Key Combination

If you are using Office Vision Text Assist, select the key combinations used for text editing functions (<Alt>+<Key> or <Ctrl>+<Key>). These key combinations are not usually supported by Windows (they perform different functions in Windows). Selecting a key combination enables BOSâNOVA TCP/IP to support your text editing functions. If you are not using Text Assist, select **None** to improve system performance.

Session Toggle Key Combination

No key, or Alt+Num, or Ctrl+Num.

Key Sound

Select **Enable** to hear a click when pressing a key.

6. To view the current Host-to-PC keyboard mapping, click **Edit** to open the Mapping Editor (see *Mapping Editor* in online Help).



If the default Host-to-PC keyboard mappings are appropriate, which is the case for most users, go to step 12. If, however, you want to change these mappings, continue with step 7.

7. In Categories, select a host action category (Characters on PC and Host keyboard, Emulation controls, Host function keys, Host operations, Macros, or Numeric pad keys).
8. Select an action from the [Host actions list] edit box. (The title on this edit box is the category you selected in Categories.) The PC key to which that host action is currently mapped appears in PC Key and is highlighted (blue border) on the keyboard display.

9. On the keyboard display, delete the current mapping of the highlighted key by left-clicking it.
10. Remap the selected host action by left-clicking the new key to which you want to map it. This opens Mapping for PC key. Click the button with the desired key combination (Norm, Shift+, Ctrl+, or Alt+). If this key combination is already mapped, you are prompted to change the existing mapping. Click **Yes** to accept the change and return to Mapping Editor. The new mapping appears in PC Key.



You can remap from a PC key to a host action by right-clicking the key you want to map. The popup menu displays the current mapping of the selected PC key combinations: Norm, Shift+, Ctrl+, and Alt+. Follow the cascading menus to delete the current mapping or to remap the key combination to a different host action.

11. When done, click **Save As**. This opens Keyboard mapping will be saved as. In Name, type a name for your customized keyboard mapping. In Description, you can type a more detailed description of this mapping. Click **OK** to save the keyboard mapping.
12. When done, click **Save As** and give the customized keyboard mapping a name. You can also add a more detailed description of the mapping (optional). Click **OK** to save the keyboard mapping.

Mapping Editor

Use the Mapping Editor dialog box to define which host actions map to which PC key combinations.

- To map from host actions to PC keys, use the edit boxes at the top of the dialog box and left-click.
- To map from PC keys to host actions, use the keyboard display and right-click.



All the following parameters apply to the selected keyboard mapping name that appears in square brackets [] in the title bar of the Mapping Editor dialog box.

Categories

Select one of the following categories:

Characters on PC and Host keyboard

This category includes all the keys for letters, numbers, and symbols.

Emulation controls

This category includes emulation actions such as <Jump to next host session> and <Play macro>.

Host function keys

This category includes the host command keys such as <Cmd1>.

Host operations

This category includes host actions such as <Attn>, <Clear>, and <Field +>.

Macros

This category includes recorded host macros such as <Sign off> and <Sign on as QUSER>.

Numeric pad keys

This category includes the numbers on the numeric keypad.

[Host Actions List]

The title of this middle edit box changes according to the category you selected in Categories. This edit box lists all the host action options in the selected category. Select the host action you want to map to a PC key.

PC Key

Displays the PC key (or keys) to which the selected host action is currently mapped.

Keyboard display: The keyboard in the bottom half of the dialog box, displays the current mapping of the keyboard mapping name shown on the title bar of the popup dialog box. Right-click a key: it will be highlighted by a blue border. The popup dialog box shows the key to which the selected host action is currently mapped. From the keyboard display, you can perform the following functions:

- Display the current mapping of any key by holding the cursor over it for a few seconds.
- Delete the current mapping of the highlighted key by left-clicking it.
- Remap the selected host action by left-clicking the new key to which you want to map it. This opens Mapping for PC key.
- Remap from a PC key to a host action by **right-clicking** the key you wish to map. The popup menu displays the current mapping of the highlighted PC key combinations: <Norm>, <Shift>, <Ctrl>, and <Alt>. Follow the cascading menus to delete the current mapping or to remap the key combination to a different host action.

OK

Not available when you select **Standard 101/102-key** or **B.O.S. 122-key** keyboards; when you customize and save the new mapping, you can then view this customized keyboard mapping without making any changes and click **OK**.

Save As

To save a customized keyboard mapping, click **Save As** and give the keyboard mapping a name; you can also add a more detailed description of the keyboard mapping (optional).

Cancel

If you do not want to change the keyboard mapping or if you made changes to the mapping that you do not want to save, click **Cancel**.

Mapping for PC Key

In the Mapping Editor, select a host operation from the list at the top of the Editor. When you left-click a key in the Mapping Editor, you open a Mapping for PC key dialog box. The key you clicked appears in square brackets [] in the title bar and the host operation you selected appears in angle brackets (< >) in the first line.

Map the host operation you chose to one of the key-combination buttons displayed in the Mapping for PC key dialog box:

- **<Norm>** maps the selected host action to the normal key character.
- **<Shift>+...** maps the selected host action to <Shift> + the key character.

- **Ctrl>+...** maps the selected host action to <Ctrl> + the key character.
- **<Alt>+...** maps the selected host action to <Alt> + the key character.

Deleting a Keyboard Mapping

You can remove a customized keyboard mapping from the Keyboard Mapping Name list by deleting it. If you want to remove it from the list, but not erase it, first Export it to a file (see “Exporting a Keyboard Mapping” directly below). Then you can Import it later if necessary.



You cannot delete B.O.S. 122-Key or Standard 101/102-Key keyboards as they are the standards from which you map your customized keyboards.

1. Open the Keyboard Customization dialog box (see “Accessing Keyboard Customization” on page 56).
2. In Keyboard mapping name, select a customized keyboard mapping.
3. Click **Delete** to remove the keyboard mapping and return to Keyboard Customization.
4. Click **OK** to save the changes and exit the Emulation Configurator.

Exporting a Keyboard Mapping

You can save a keyboard mapping to a file and send it to others on the network.

1. Open the Keyboard Customization dialog box (see “Accessing Keyboard Customization” on page 56).
2. In Keyboard mapping name, select a customized keyboard mapping.
3. Click **Export** to open the Save As dialog box.
4. In File name, enter the Keyboard mapping name. In Save as type, select **Keyboard mapping files (*.kbm)**. Click **Save** to save the file and return to the Keyboard Customization dialog box.
5. Click **OK** to exit the dialog box.

Importing a Keyboard Mapping

You can open a keyboard mapping that has been saved to a file (for example, by the system administrator). You can also make changes to it.

1. Open the Keyboard Customization dialog box (see “Accessing Keyboard Customization” on page 56).
2. In Keyboard mapping name, select a customized keyboard mapping.
3. Click **Import**; locate the file and click **Open**. The customized keyboard mapping opens directly in Mapping Editor.



The imported keyboard mapping overrides the keyboard type and style settings for all the keyboard mappings listed in Keyboard Mapping Name. If you need to change these settings, see “Customizing Your Keyboard” on page 56.

4. Make any changes and click **Save As** to save the new mapping.
5. Enter the new customized keyboard mapping name and click **OK**. Click **OK** to accept the changes and to exit the Emulation Configurator.

CUSTOMIZING the EMULATION TOOLBARS

There are six toolbars in BOSâNOVA TCP/IP (listed below). Select **View > Toolbars** to open the Toolbar dialog box to define which toolbars are displayed and which buttons they contain.

The toolbars below are shown as they would appear when “floating” (that is, when they have been dragged into the emulation screen area). When toolbars appear under the menu bar, they do not have titles.



All toolbar functions are duplicated in menu items or by keyboard hotkeys.

You can display toolbars with visible borders or in the style used by Microsoft Internet Explorer (where a button has a visible border only when the mouse cursor is on the button). Select the kind of borders you want in the Toolbar dialog box.

Sessions



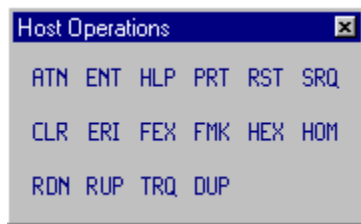
Contains a button for each defined session plus buttons for accessing the Emulation Configurator and Print Screen setup, running ATF, and toggling between full-screen and normal display mode.

General



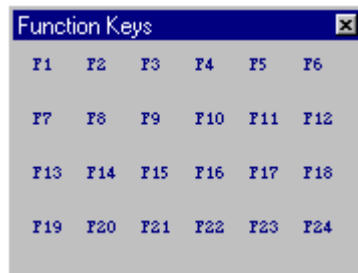
Contains buttons for performing a print screen, changing fonts, playing macros, displaying print attributes, and changing the ruler cursor style.

Host Operations



Contains buttons of these common host commands.

Function Keys



Contains buttons for function keys.

Printer



(Appears only if the in-focus session is a printer emulation session.) Contains buttons for starting and stopping print jobs.

Macros



Contains buttons of all defined macros. If no macros have been recorded, this toolbar will not appear.

Customizing Toolbars

1. From the emulation, select **View** ➤ **Toolbars**.
2. Select the toolbar you want to modify and click **Customize**. This opens the Customize Toolbar dialog box (for details, see *Customizing Toolbars* in online Help).
3. Customize the toolbar:
 - To add a button, select it in the Available Buttons table on the left side of the dialog box, and click **Add**.
 - To remove a button, select it in the Toolbar Buttons table on the right side of the dialog box, and click **Remove**.
 - To display a small popup help message over interface elements when the cursor rests on them for a few seconds, select **Show Tooltips**.
 - To display toolbars in the same style used by the Microsoft Internet Explorer; that is, a button has no visible border until the mouse cursor rests on it, select **Set MSIE Style**.
4. When you have made all changes, click **Close** to return to the Toolbar dialog box.



*Changes are not saved until you click **OK** in the Toolbars dialog box. This saves the changes and returns you to the emulation. Click **Reset** to return the values to the previously saved settings.*

5. Click **OK** to save the changes and close the Toolbars dialog box. The modifications appear as soon as that toolbar is displayed.

Arranging Toolbar Buttons

You can arrange the order of buttons in toolbars in two ways.

- From the Customize Toolbar dialog box:
 - a. Select **View** > **Toolbars**.
 - b. Select a toolbar and click **Customize** to open the Customize Toolbar dialog box (for details, see *Arranging Toolbar Buttons* in online Help).
 - c. Select a button in Toolbar Buttons (on the right side of the dialog box), and click **Move Up** or **Move Down** to reposition it. Toolbar buttons are arranged according to the order in which they appear in the Toolbar Buttons table.
 - d. When you have finished, click **Close**.
 - e. Click **OK** in the Toolbars dialog box to save the changes and return to the emulation screen.
- On the toolbar:
 - a. <Alt>-click a toolbar button (that is, click a toolbar button with the left mouse button while holding down the <Alt> key).
 - b. Drag the button to a new location on the toolbar and release the mouse.
 - c. If you drag the button off the toolbar, it will be removed; to restore it, go back to the Customize Toolbar dialog box.

Moving Toolbars

Windows supports “floating toolbars”: that is, you can click-and-drag toolbars to different places on your screen.

- Click a toolbar and drag it onto the session area. When you release the mouse button, the toolbar changes into a toolbox. The buttons remain arranged in the same order.
- Click a toolbar and drag it to the bottom of the session area. When you release the mouse button, the toolbar is displayed at the bottom of the screen.
- Click a toolbar and drag it to either side of the session area. When you release the mouse button, the toolbar is displayed vertically at the side of the screen.

EMULATION VIEWING OPTIONS

You can control various viewing options in BOSâNOVA TCP/IP:

- To determine which toolbars are displayed, select **View > Toolbars** in the emulation menu bar. This opens the Toolbars dialog box.
- To display the status bar, select **View > Status Bar** in the emulation. If a check appears next to this menu item, the status bar appears at the bottom of the display session screen. To turn it off, click again.
- To convert the host display to a Windows style display, select **View > MorphExpress** in the emulation. MorphExpress changes the look of the display session, converting it into a true GUI application.



MorphExpress only appears in the View menu if a display session is active.

HOTKEYS

BOSâNOVA TCP/IP supports the following hotkeys:



The hotkey examples given here are for 101/102 keyboards only.


- <Alt> + <Page Up> jumps from one session to another
- <Alt> + <Insert> toggles between a full screen and a split screen for the present session
- <Alt> + <Page Down> cycles between the different ruler cursor styles
- <Alt> + <F3> starts recording a macro
- <Alt> + <F5> starts playing a macro
- <Alt> + <F8> toggles between Test mode (in which host attributes are displayed) and normal mode
- <Alt> + <Print Scrn> performs a print screen to the local PC printer

MORPHEXPRESS

MorphExpress is an automated tool that converts your original host screen into a GUI screen by:

- analyzing host screens
- automatically detecting commands and menus and converting them from plain text to GUI buttons
- adding panels and graphic elements
- converting subfiles into tables, and options into buttons

Displaying the MorphExpress Screen

Click  on the toolbar to toggle between the GUI display and your previous color scheme choice (Color or Mono).

The original (non-MorphExpress) color tables are always saved.

Configuring MorphExpress

1. From the Advanced Properties tab in the Emulation Configurator, select **MorphExpress** in the top pane and click **GUI Customize** in the bottom pane to open GUI Logic Configuration (for details, see *Configuring MorphExpress* in online Help).
2. Set the parameters to define the way MorphExpress recognizes and converts screen elements.
3. Click **OK** in each dialog box to save the changes and close the dialog box until you exit the Emulation Configurator. The changes take effect as soon as you return to the emulation screen.

Customizing GUI Controls

1. From the Advanced Properties tab in the Emulation Configurator, select **Display Properties** in the top pane and click **Display Properties** in the bottom pane to open the Display Properties dialog box.
2. In Display Mode, select **MorphExpress** and click **Customize** to open the MorphExpress Options dialog box, where you define how the controls look.
3. Make changes and click **OK**. Click **OK** in each dialog box to save the changes and close the dialog box until you exit the Emulation Configurator. The changes take place automatically in **all** display sessions.

Customizing GUI Colors

1. From the Advanced Properties tab in the Emulation Configurator, select **Display Properties** in the top pane and click **Display Properties** in the bottom pane to open the Display Properties dialog box.
2. Under Display Mode, select **MorphExpress**; under Color scheme name, select the palette from the dropdown list.
3. Select a background color for controls from the BackColor dropdown palette.
4. Select a background color for input fields from the BackColor dropdown palette. (Using a contrasting color helps make input fields more noticeable.)
5. Click **Apply** to make the changes. You can see how the selections look in the sample (the top half of the dialog box). When you are satisfied with the color schemes, click **OK** to close the Emulation Configurator.

MISCELLANEOUS

PDE (Printer Driver Editor)

The application named Printer Driver Editor is a part of BOSâNOVA TCP/IP. PDE enables you to modify custom printer drivers. For details, refer to online Help.

Euro Symbol Support

The euro is the single currency of the European Monetary Union that was adopted by 11 member states on 1 January 1999. These are Belgium, Germany, Spain, France, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland. For more information see the Euro Web site (<http://europa.eu.int/euro>) run by the European Commission.

There are now fonts, keyboard types, and code pages that add the euro symbol character. For euro symbol support to function correctly in your B.O.S. applications, both the host and Windows must be configured for euro symbol support. Check your host and Windows configuration for euro symbol support and select **Euro support** in the Administrator (in **Administrative parameters** ➤ **Host language/country**). If your host and/or Windows are not configured for euro support, deselect **Euro support** to use the old code page.

Host Requirements

AS/400 Release (Version)	Group PTF Number	Info APAR Number
V3R2M0	SF99205	II11523
V4R1M0	SF99206	II11523
V4R2M0	SF99207	II11523
V4R3M0	SF99208	II11523

Changes Required for Euro Symbol Support

The character ID for all countries was changed from 697 to 695. The following table contains the required code changes by country:

Country	Old KBDTYPE and CCSID (code page)	New (Euro) KBDTYPE and CCSID (code page)	Euro EBCDIC	Euro ANSI
Austria/Germany	AGB 237	AGE 1141	0x9F	0x80
Belgium	BLI 500	BLM 1148	0x9F	0x80
Canadian French	CAI 500	CAM 1148	0x9F	0x80
Denmark	DMB 277	DME 1142	0x5A	0x80
France (azerty)	FAB 297	FAE 1147	0x9F	0x80
Finland/Sweden	FNB 278	FNE 1143	0x5A	0x80
Italian	ITB 280	ITE 1144	0x9F	0x80
Netherlands	NEB 037	NEE 1140	0x9F	0x80
Norway	NWB 277	NWE 1142	0x5A	0x80
Portugal	PRB 037	PRE 1140	0x9F	0x80
Spain	SPB 284	SPE 1145	0x9F	0x80
Switzerland/French	SFI 500	SFM 1148	0x9F	0x80
Switzerland/German	SGI 500	SGM 1148	0x9F	0x80
United Kingdom	UKB 285	UKE 1146	0x9F	0x80
United States/Canada	USB 037	USE 1140	0x9F	0x80

DTF (DATA TRANSFER FUNCTION)

Introduction to DTF

DTF (Data Transfer Functions) is a 32-bit Windows utility for transferring data in either direction between a BOSâNOVA XTC and a host. The connection type depends on the B.O.S. client you have installed.

Data transfers are managed by file transfer profiles. These are files with an **.h2p** (host-to-PC) or **.p2h** (PC-to-host) extension that contain information about the data and how it is to be transferred, e.g., the source and destination paths, the transfer type, and conversion information.

After you create a DTF profile, you have a number of options to use for transferring the data: DTF interface (interactive mode), DTF background mode, Profile lists (batch mode), and the Scheduler. In addition, the Send utility provides a tool for transferring strings and running script files in display sessions via HLLAPI.

DTF contains four components:

- The DTF Wizard helps you create new DTF profiles.
- The DTF interface displays DTF profiles in a Windows-like tree structure. In the DTF interface, you can:
 - View profiles and profile lists
 - Create profiles
 - Change profile parameters
 - Create profile lists
 - Change profile lists
 - Run data transfers in interactive mode. (See also *Running DTF in Background Mode*, in online Help.)
- The Scheduler lets you define automated transfers to run on a specified schedule or as triggered by a dynamic event.
- The Send utility lets you send strings or commands to the host.

With DTF, you can create a list of profiles and then run these multiple transfers in background mode.

If you have used ATF for data transfer, you will be familiar with many of the terms and procedures in DTF. For information about **new** terminology and procedures in DTF, see *Tips for ATF Users*, in online Help.

For details about running data transfers, refer to the online Help.

The DTF Wizard

Use the DTF Wizard to create a new DTF profile. A DTF profile contains information about the data and how it is to be transferred. The parameters that appear in the wizard depend on the host type and transfer direction (host-to-PC or PC-to-host) you selected in DTF Open Profile. For details about each step in the DTF Wizard, click **Help** in the wizard screen.

The DTF Interface

The DTF interface displays the selected data transfer profile or profile list. It provides all the controls for creating DTF profiles and profile lists, viewing the host file, and running data transfers.

Menu Bar

Use the menus in the menu bar to perform all the functions available in DTF.

Toolbar

Use the buttons on the toolbar to perform many of the common functions found in the menus. ToolTips define the buttons.


Panes

The **top pane** of the DTF interface uses a Windows-style tree structure to display the parameters of the displayed profile or profile list. This structure will be familiar and intuitive to you if you are familiar with Windows Explorer in Windows 95 or Windows NT.

To use this structure:

- If an item has a **plus sign (+)** next to it, it contains nested items. Click the plus sign to expand the item (display the nested folders).
- If an item has a **minus sign (-)** next to it, it is already fully expanded and all the nested items are displayed. Click the minus sign to collapse that part of the tree.
- The names of the parameter sets appear in black; current status values appear in blue. Values always appear in <brackets>.
- When you select a parameter set in the top pane, buttons and controls for defining or changing that parameter set appear in the **bottom pane**.



To access online Help for the displayed dialog box, press F1, click , or select **Help** ➤ **Context-sensitive Help**.

The parameters are divided into the following categories:

General

Host type, transfer direction, transfer type, code page conversion information.

Host

Information for finding and identifying the source or destination on the host and for defining how the transferred data will be written on the host.

PC

Information for finding and identifying the source or destination on the PC and for defining how the transferred data will be written on the PC.

Advanced

Advanced parameters affecting the data transfer.

The Scheduler

With the Scheduler, you can run tasks automatically, according to the time and other conditions. You can choose to run file transfers at set periods of time, or based on certain **string triggers** which occur on the host emulation screen. You can schedule to send strings or run script files via the Send utility. You can schedule other Windows applications to run in conjunction with file transfers.

Create a task using the Scheduler Wizard, which prompts you for all required information.

The Scheduler Interface

The Scheduler interface resembles the DTF interface, with a top pane containing a tree structure of all created tasks and their parameters.

The Menus

The Scheduler menu bar contains the following menus:

File

create new, open, close, save, and hide Scheduler.

Task

suspend and resume tasks. Also contains Options for setting the frequency and intervals of the scheduled tasks.

Log

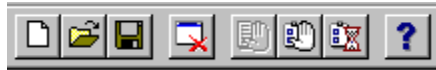
display details and write log to a file.

Help

displays this online Help topic.

The Toolbar

The following toolbar contains the basic tools for working with tasks.



Scheduler Wizard

With the Scheduler, you define data transfer tasks to be run automatically. You can choose to run file transfers at set periods of time, or based on certain **string triggers** which occur on the host emulation screen. You can schedule to send strings or run script files via the Send utility. You can schedule other Windows applications to run in conjunction with file transfers. Use the Scheduler Wizard to define the tasks.

For details about each step in the Scheduler Wizard, click **Help** in the specific wizard screen.

In the first screen, enter a **description**.



This is the name of the DTF task that will appear in the Scheduler list, so we recommend using a descriptive name that will help you remember the purpose of the task.

The Send Utility

The Send utility is a B.O.S. application for sending a simple string from the BOSâNOVA XTC to a specified position on a specified display session or for processing a script file via the specified display session.

A simple string is a string which will be sent to the specified display session either at the current cursor position or another specified position.

A script file is a series of statements (commands) to be processed. The statements must follow a specific syntax and must be terminated with a carriage return/line feed combination (also referred to as EOL, or End-of-Line).

For details about Send syntax and usage, refer to online Help.

HOST EXPLORER

Introduction

With B.O.S.'s Host Explorer, you can view your AS/400 as if it were another drive on your BOSâNOVA XTC. The Host Explorer is designed to look and function similarly to Windows Explorer or Internet Explorer. It includes:

- access to all connected AS/400s, displaying libraries and files as if they were folders on another network drive
- drag-and-drop copying of folders or files
- send print jobs directly from your BOSâNOVA XTC to AS/400 printer queues
- a full, customizable toolbar (with or without text labels)

Host Explorer Interface

The Host Explorer is designed to look and function similarly to Windows Explorer or Internet Explorer.

Menu Bar

The active window contains a menu bar with the following menus: File, Edit, View, and Help. Most of the menu functions are standard Windows-type functions. For information on functions specific to B.O.S.'s Host Explorer, refer to online Help.

Toolbar

The active window contains a toolbar with standard buttons (Back, Up, Cut, Copy, Paste, Refresh, Delete, Properties, Views) and a Stop button for stopping the current activity, while keeping Host Explorer active.



Some of the toolbar buttons (for example, Back, Views) are followed by an arrow. As in Microsoft Internet Explorer, you click the arrow to select from a list of options or click the button to toggle through the options.

You can hide the toolbar by deselecting Standard Buttons (**View** ➤ **Toolbar**), or hide the button descriptions by deselecting Text Labels (**View** ➤ **Toolbar**).

Tree View

When you first open Host Explorer, all drives appear in the tree view (left pane of the active window):

AS/400 Folders appears at the end of your BOSâNOVA XTC network list at the same level as My Computer. Expand folders by clicking them; the contents of the folders appear in the right pane.

Printer appears at the end of each AS/400's list of folders. Click the Printer folder to view (in the right pane) all the printer devices on that AS/400. You can connect appropriate PC printer drivers to AS/400 printer devices and then send print jobs directly from your PC to AS/400 printer queues. See *Printing from Your PC to an AS/400 Printer*.

Status Bar

The bottom of the active window contains the Status Bar. This displays the current status of Host Explorer; for example, Reading (if trying to access the host), Ready, Pasting, etc.

REMOTE COMMAND

Introduction

With B.O.S.'s Remote Command Utility, you can send an AS/400 CL command (or commands) to a host system from a BOSâNOVA XTC.

Syntax

BSRMTCMD *command* [*//system*] /z

or

BSRMTCMD /I [*drive*][*path*]*filename* [/q] [*//system*] [/z]

Parameters



Parameters appearing in the above syntax in [brackets] are optional.

- *command*
The AS/400 CL command, with parameters. This is the command to be sent and executed on the specified AS/400 host system.
- /I
Read commands from the specified file; the filename (and optional path) must be separated from the /I by a space.
- *filename*
The name of the file containing the AS/400 commands. The file must be a text file with only one command per line. If the filename is a long name containing a space, you must quote the entire filename—including the full path—in apostrophes (').
- /Q
When using the /I parameter (sending commands from a batch file), any error occurring appears on the BOSâNOVA XTC screen, prompting you to select Y or N (to continue or not). The /Q parameter suppresses all error messages and assumes Y whenever an error occurs.
- *//system*
Name of the system on which the commands are to be run. If not defined, the default system name is used.
- /Z
If selected, all messages other than error messages are suppressed.

- **/?** or **/H**
Displays help. (Using the command BSRMTCMD without any parameters also displays help.)

Examples

Example 1

In this example, the AS/400 CL command CRTLIB BOSTEST (create a library called “Bostest”) was sent to the default host.

```
rmtcmd crtlib bostest
```

Example 2

In this example, the file Tuesday.txt, located on drive D: in the folder \Remote, was sent to the host Mainsys.

```
BSRMTCMD /I D:\Remote\tuesday.TXT //mainsys
```

Example 3

Here is a sample command file as used in Example 2, above:

```
crtlib bosctest  
chkobj bsrrr
```

TROUBLESHOOTING

Printer Session

In a printer session, if you selected **Current Windows Driver** (General tab) and you saved print output in ASCII format (Diagnostics tab ➤ Save to ASCII file), do *not* click **Collect Technical Support Information** because the resulting file may be too large.

Euro Support

For euro symbol support to function correctly in your applications, both the host and Windows must be configured for euro symbol support. If you receive a euro symbol support error, check your host *and* Windows configuration for euro symbol support and select **Euro support** in the Administrator (in **Administrative parameters** ➤ **Host language/country**). If your host and/or Windows are not configured for euro symbol support, deselect **Euro support** to use the old code page. For details, see “Euro Symbol Support” on page 70.

Traces and Screen Captures

When you experience problems with an emulation session, Technical Support may request that you provide them with files to help them solve the problem. Prepare files, as follows:

1. To help debug a problem, you may be asked to record a trace (*.trc or *.bts files) or create a screen captures (*.scn files). This is done from either the Emulation Configurator (Advanced Properties ➤ Diagnostics) or the Router Configurator. In addition, you may be asked to record a print output (*.asc or *.ebc files) from printer emulation sessions.
2. Then, send the technical information file (default name is: Bsinfo.bts) from the Administrator (Diagnostics ➤ Troubleshooting Information). The technical information file *automatically* includes all *.trc, *.scn, *.bts, *.asc, and *.ebc files created.

Recording a Telnet Trace

Record a Telnet Trace when you have problems with an display emulation session.

To record a trace:

1. Close all applications.
2. In the Emulation Configurator, select the **Advanced Properties** tab.
3. Expand Diagnostics and select **Record Telnet Trace** in the top pane.

4. In the bottom pane, select **Record Telnet Trace** and specify a filename and location.
5. Create screen captures, if required (see the next section).
6. Run an emulation. Make sure you run the TCP/IP trace on the first session only!
7. When the error occurs again, close the emulation. Trace data is written to the file specified in step 4, above.
8. Prepare the information file for Technical Support; see “Preparing the Information File” on page 82.

Screen Capture

Playback Recorded Screens

If selected, you must specify the playback file (see *Record Screens for Playback*, below) or use the pulldown list of the last four previously stored files.

Record Screen for Playback

Creates a file with “snapshots” of the display session screens. Enter the filename (default Demo.scn), using the extension .scn. The file is automatically created in the BOSâNOVA TCP/IP installation folder (or another folder, if defined).



***Record** only works for the first (display) session; **Playback** can be run during any display session. The screens are played back in the same sequence in which they were recorded.*

To record a screen capture:

1. Close all open sessions.
2. In the Emulation Configurator, select the **Advanced Properties** tab.
3. Expand Diagnostics and select **Screen capture** in the top pane.
4. In the bottom pane:
 - a. Select **Record screen for playback**.
 - b. If you don't want the screen grabs to be written to Demo.scn, browse for another file; note that *all* screen captures will be recorded in the file selected.
 - c. Click **OK**.

5. Continue at step 6 (“Run an emulation”) in the previous section. Note that each screen that is opened when you run the emulation will be captured and placed in the file selected in 4b, above.

From a Printer Session

1. In an open Printer session, right-click.
2. Select Properties.
3. Select the **Diagnostics** tab.
4. Select **Activate Diagnostic Mode** and select the output option.
5. Prepare the information file to send to Technical Support for analysis; see Preparing the Information File, directly below.

Preparing the Information File



*Make sure that you have created **all** the trace files and screen captures required by Technical Support before preparing the information file.*

1. Close all sessions.
2. Run the Administrator.
3. In the top pane, expand Diagnostics and select **Troubleshooting information**.
4. In the bottom pane, click **Collect Technical Information** to open the User Information dialog box (for details, see *Collecting User Information*, below).
5. Complete the information and save the user information file (default name Bsinfo.bts).
6. The user information file automatically includes all trace and screen captures. Send the file (as an e-mail attachment) to Technical Support for analysis.

Collecting User Information

Use this dialog box to collect diagnostic information in the Administrator and to collect printer troubleshooting information in **Printer Session Properties > Diagnostic**.

The information you enter in these fields will be written to a text file when you click **OK**. The default file is Bsinfo.bts in the BOSâNOVA TCP/IP installation folder. Include this file along with the trace (dump) files or recorded screens for Technical Support.



The file also automatically includes other information, depending on the origin (Administrator or Printer Session Properties). When run from the Administrator, data about your system, all defined sessions, and EBCDIC to ANSI translation tables, are automatically captured and added to the file. When run from Printer Session Properties, a subset of this information is captured (system information plus the specific printer session only).

Name

By default, the name you used when installing BOSâNOVA TCP/IP will be used. You can change this.

Company

By default, the company name you used when installing BOSâNOVA TCP/IP will be used. You can change this.

Address

Enter your full mailing address, including the postal code and country.

Phone Number

Enter a daytime phone number where we can reach you.

E-mail Address

(If available)

Tech Support Call #

This number will be provided by Technical Support. Make sure to include it so that your diagnostic files can be properly tracked.

Host Type

Enter your host type (AS/400, System/36, AS/36, etc.).

Host OS Version

Enter the complete version number of your host operating system.

Description

Describe the problem carefully. Under what circumstances does the problem occur? Are you able to duplicate it? Have you made any changes to your connectivity hardware or software that could contribute to this?

Contacting Technical Support

Before Contacting Technical Support:

1. Refer to the appropriate topic in the Troubleshooting sections. The problem may be something you can solve on your own.
2. If you can't solve the problem by yourself, run the Administrator. In the top pane, expand **Diagnostics** and select **Troubleshooting information**. In the bottom pane, click **Collect Technical Information** to open the User Information dialog box. Fill in the form before contacting Technical Support. If contacting us via fax, include a printout of this form; otherwise, have it handy when you call us.

Web site	http://www.bosanovathinclient.com
BOSÂNOVA, Inc., North America	Tel: sales: (866) 865-5250; (623) 516-0029 support: (866) 864-5250 Fax: (623) 516-8697 sales@bosanova.net support@bosanova.net
BOSÂNOVA, Inc., France	Tel: +33-1-53-14-59-80 Fax: +33-1-53-14-01-74 sales@bosanova.fr support@bosanova.fr
B.O.S., Israel	Tel: +972-4-990-7555 Fax: +972-4-999-0334 sales@boscom.com support@boscom.com

