

Toshiba Global Commerce Solutions
Point-of-Sale Subsystem



Toshiba 4610 Ethernet Printer Configuration Utility

Version 1.0

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1.0 Overview

1.1 Introduction

This document provides description for the Toshiba 4610 Ethernet Printer Configuration Utility. This tool helps to configure the network printers in the stores.

The available configurations to apply are:

- Firmware update
- Font Download (only DBCS font download supported in this release)
- General Configuration Updates (MCTs, logos, and Network settings)

1.2 Hardware Supported

Table 1.2 POS Printer supported devices

Device	Connectivity	Comments
1. 4610-2xR	Network	
2. 4610-1NR	Network	

1.3 Operating System

One of the following:

- Microsoft POSReady
- Microsoft Windows® XP Service Pack 3
- Microsoft Windows Embedded Point of Service (WEPOS)
- Microsoft Windows 7 Service Pack 1
- SUSE Linux Enterprise Desktop 11 (SLED 11) Service Pack 3.
- SUSE Linux Enterprise Server 11 (SLES 11) Service Pack 3.

If support for other operating system is desired, please contact your Toshiba representative or visit the Toshiba support site at:

<http://www.toshibages.com/support>

And submit a **TechLine** question under “Ask a Retail Question”.

2.0 Installation

The following main installation package can be downloaded from

<http://www.toshibagcs.com/support/>:

2.1 Installation for SLED/SLES

The following is a list of rpms that are necessary to install the product:

- toshiba-4610netconfig-<version>-<build>.i386.rpm
- ibm-java-i386-jre-<version>.i386.rpm

The instructions in this document assume the following:

- User has root privileges
- % represents console command prompt
- The comments are indicated by #.

Ethernet Printer Configuration Utility

To Install:

```
% rpm -ivh toshiba-4610netconfig<version>-<build>.i386.rpm
```

To uninstall:

```
% rpm -e toshiba-4610netconfig
```

IBM JVM

To Install:

```
% rpm -ivh ibm-java-i386-jre-<version>.i386.rpm
```

To uninstall:

```
% rpm -e ibm-java-i386-jre-<version>
```

Setup path and symbolic links:

If Operating System provides a default JVM or you have previously installed another JVM, then symbolic links and the paths must be set manually to point to IBM JVM.

- Remove old java symbolic links and re-link them to IBM JVM.

```
rm /usr/bin/java
```

```
ln -s /opt/ibm/java-i386-60/jre/bin/java /usr/bin/java
```

- Setup path., as necessary. This can be added to your .profile

```
export PATH=/opt/ibm/java-i386-60/jre/bin:$PATH
```

- Check IBM JVM version. The output should be something like below. If not, check symbolic links or paths.

```
java -version
```

```
java version "1.6.0"
```

```
Java(TM) SE Runtime Environment (build pxi3260sr9fp1-  
20110208_03(SR9 FP1))
```

2.2 Installation for Windows

Installation

Run the Setup.exe file and follow the directions on each panel.

Uninstallation

You can uninstall the product from Windows by interactively using **the Add/Remove Programs** option in the Windows Control Panel

3.0 Command Line Utility

The Toshiba SureMark™ 4610 Ethernet Printer Configuration Utility provides a command line mechanism to apply different configurations to the POSPrinter determined by a configuration files.

The output of the execution will be shown on the console.

The syntax is as follows:

```
4610NetConfig -file <configurationFile> -timeout <executionTimeout>
or
java com.tgcs.posj.tools.config.ControlCenterApp
    -file <configurationFile> -timeout <executionTimeout>
```

Options:

-file	Define the name of the configuration file
-timeout	Time to wait before to end the execution of the utility (OPTIONAL)

Where for -file:

<configurationFile> The location of the file containing the list of tasks (configurations) to be applied to the devices

Where for -timeout:

<timeout> The time in milliseconds used by the utility to wait before to end the execution of the tool. The utility finish the execution when there are none configurations executing or the timeout expired. Default value 1800,000 (30 minutes).

3.1 Overview of the configuration file

The printer configuration utility makes use of a set of configuration profiles that are defined in XML files:

1. storeConfig.xml:
 - This is the main Device Configuration file that contains one or more printer specific information, such as IP Address.
 - This file contains one or more profileConfig.xml specific to a given printer.
 - Filename can be changed
2. profileConfig.xml
 - The profileConfig.xml contains the type of configuration to apply, such as firmware update profile, font download profile.
 - Once created, single profileConfig.xml can be applied to multiple printers in storeConfig.xml file.
 - File name can be changed.

The store configuration file contains the required information to identify all the managed Toshiba 4610 Ethernet Printers on the network and also the desired profile configuration that will be applied to each device.

The profile configuration is structured in a way that allows the user to define different configuration profiles that are independent from a particular device attached on the network. These profiles will define all the configuration elements that can be applied to a network printer including network settings, Mcts, fonts and logos as well as the firmware file to update.

There can be any number of Profile Files (profileConfig.xml) defined by the customer and those settings will be applied using the store configuration file by the Utility.

The Figure 3.1 shows the main configuration file (“storeConfig.xml”) applying 2 different configurations; every profile configuration can be applied to one or many printers.

In this example

- The “FontDownloadProfileConfig.xml” applies to ‘Printer 1’
- And the “FirmwareProfileConfig.xml” applies to ‘Printer 1’ and ‘Printer 2’.

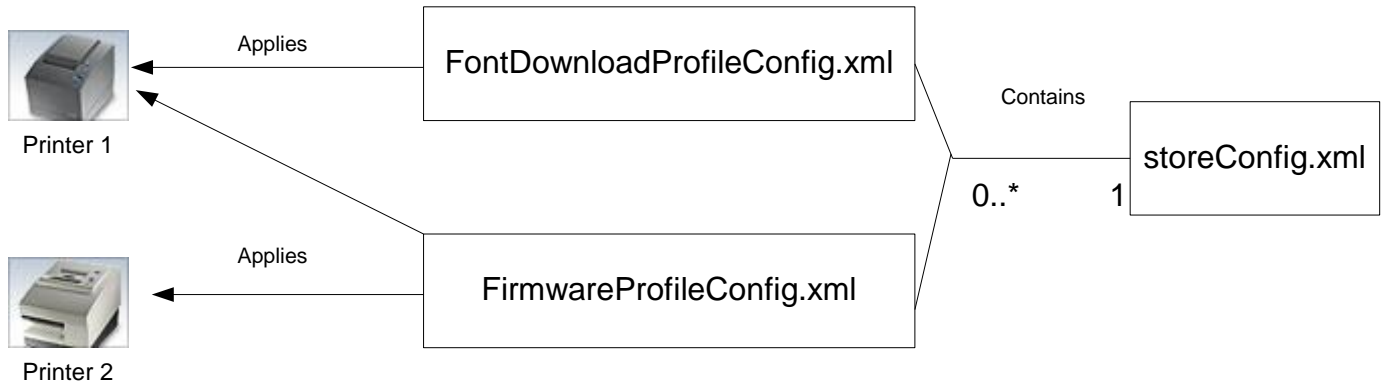


Figure 3.1

3.2 Store Configuration

The store configuration file is the main entry point for the program to identify and apply changes into the network devices, the required properties and values defined on the schema are necessary to execute the different tasks provided for the utility.

Examples file for the storeConfig.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<DeviceConfigurations">

    <DeviceConfiguration deviceAddress="9.7.111.124" userName="Admin" password="Admin">
        <Description> Printer 1</Description>
        <ConfigurationProfile filePath="FontDownloadProfileConfig.xml" />
        <ConfigurationProfile filePath="FirmwareProfileConfig.xml" />
    </DeviceConfiguration>

    <DeviceConfiguration deviceAddress="9.7.111.123" userName="Admin" password="123">
        <Description> Printer 2</Description>
        <ConfigurationProfile filePath="FirmwareProfileConfig.xml" />
    </DeviceConfiguration>

</DeviceConfigurations>
```

Every XML entry is composed by:

- Device Configuration – Contains the Printer Device Information

- Description – Some description related to the configuration

- Configuration Profile – Define the configurations to apply to the defined printer device.

DeviceConfiguration tag:

Attribute	Description	Required
deviceAddress	The device address for the network printer, it can be either a valid ipv4 or a valid domain name address.	Y
username	The user name specified for the network printer session.	Y
password	Specifies the corresponding password for the network printer session	Y
udpPort	Indicates the UDP port for the printer communication. Default 9100	N
tcpPort	Indicates the TCP port for the printer communication. Default 9100	N
httpTimeout	Timeout value in milliseconds for the printer Http service session. Default 1000	N
claimTimeout	Timeout value for the network printer claim. Default 1000	N

ConfigurationProfile tag:

Attribute	Description	Optional
filePath	The relative or absolute path to the profile configuration	N

3.3 Firmware Download Profile Configuration

```
<?xml version="1.0" encoding="utf-8"?>
<ConfigurationProfiles>
  <ConfigurationProfile name="Firmware Profile">
    <creation configurationClass="com.tgcs.posj.tools.config.tasks.FlashUpdateConfiguration" />
    <FirmwareConfig fileName="/4610Utility/aip46v4.hex" timeout="120" maxUpdates="10" />
  </ConfigurationProfile>
</ConfigurationProfiles>
```

Attribute	Description	Required
fileName	Specifies the file name or URL of the file containing the firmware to be downloaded into the device.	Y
maxUpdates	Maximum number of configuration updates that can be executed at the same time. To set unlimited updates use the value of "*" Default : 10	N
timeout	Number of seconds before failing the method Default : 120	N

Note:

During firmware download, if you see the following error, you may ignore the error message. It is possible that the printer has already updated the firmware, but the firmware upload return code never received by the utility.

Error Description:

Read timed out (com.tgcs.net.NetException: Read timed out)

You can check the firmware version to make sure that is updated as follows:

- 1) Re-run firmware download profile configuration. If firmware updated successfully, it will display actual firmware version, and no action is taken.
- 2) Check printer firmware by performing offline tests.
- 3) Check printer firmware by running JavaPOS POS Control Center or OPOS Configuration Tool.

3.4 Font Download Profile Configuration

```
<?xml version="1.0" encoding="utf-8"?>
<ConfigurationProfiles>
  <ConfigurationProfile name="Font Download Profile">
    <creation configurationClass="com.tgcs.posj.tools.config.tasks.FontDownloadUpdateConfiguration"/>
    <Font fileName="/4610Utility/jpnms932.fon" sleep="30" />
  </ConfigurationProfile>
</ConfigurationProfiles>
```

Attribute	Description
fileName	Specifies the file name of the file containing the firmware to be downloaded into the device. The file must have “.fon” extension otherwise the update will fail.
sleep	Time the tool will sleep before to complete the font download update process, when the value is less than 30 seconds the default is used. Default 30 seconds

In this release, only double byte (DBCS) font download is supported. The supported double byte font files are installed with this product. The details are described below.

The location of font files: <Root Install Directory>\fonts

DBCS font filename	Description
chnm950b.fon	Code page 950: Traditional Chinese (BIG-5) Bold font
chnm950n.fon	Code page 950: Traditional Chinese (BIG-5) Normal font
chnm1381.fon	Code page 1381: Chinese Simplified (PRC)
hkscs951b.fon	Code page 951: Hong Kong Bold font
hkscs951n.fon	Code page 951: Hong Kong Normal font
hkscs-2004.fon	Code page 951: Hong Kong Supplementary Character Set
jpngs932JIS.fon	Code pge 932: Japan Gothic Style font JIS
jpngs932NewJIS.fon	Code page 932: Japan Gothic Style font NewJIS
jpnms932.fon	Code page 932: Japan Mincho Style font
korms949.fon	Code page 949: Korea Minco Style
korms949_Gothic.fon	Code page 949: Korea Gothic Style

3.5 General Profile Configuration

The General Configuration profile is used to change the following setting in the printer:

- Change selected MCT values
- Download messages
- Download logos
- Change Network setting associated with the Printer.

```
<?xml version="1.0" encoding="utf-8"?>
<ConfigurationProfiles>
  <ConfigurationProfile name="Name of the configuration profile">
    <creation configurationClass="com.toshiba.net.utility.ConfigurationProfileImp" />
    <GeneralConfig>
      <MCT number="38" value="" />
      <MCT number="39" value="" />
      <MCT number="40" value="" />
      <MCT number="41" value="" />
      <MCT number="131" value="" />
      <Messages erase="true">
        <Message number="1" message="Hello" />
        <Message number="2" message="Welcome" />
      </Messages>
      <Logo erase="true">
        <slot number="1" station="RECEIPT" fileName="/config/logos/logo1.bmp" width="2" />
        <slot number="2" station="RECEIPT" fileName="/config/logos/logo2.bmp" width="2" />
      </Logo>
      <NetworkConfig name="hostname" value="" />
      <NetworkConfig name="httpuserid" value="" />
      <NetworkConfig name="httppw" value="" />
      <NetworkConfig name="fixedipselected" value="" />
      <NetworkConfig name="fixedipenable" value="" />
      <NetworkConfig name="autoipenable" value="" />
      <NetworkConfig name="ipv4fixedip" value="" />
      <NetworkConfig name="subnet" value="" />
      <NetworkConfig name="gateway" value="" />
      <NetworkConfig name="snmpmanager1" value="" />
      <NetworkConfig name="snmpmanager2" value="" />
      <NetworkConfig name="snmptrap1" filePath="c:\snmptrap1.txt" />
      <NetworkConfig name="snmptrap2" filePath="c:\snmptrap2.txt" />
    </GeneralConfig>
  </ConfigurationProfile>
</ConfigurationProfiles>
```

Every General Configuration entry may be composed by:

MCT

Messages

Logo

Network Settings

MCT

Attribute	Description	Required
number	The position of the MCT to update. Available MCT list: - 38 lowPaperSensing - 39 criticallyLowPaperSensing - 40 calibrationConstant - 41 partialCutDetection/paperMotionDetection - 131 lowPaperDetectionDisabled/lowPaperLEDDisabled	Y
value	Hex parameter. Range 0x0000 – 0xffff Review hw specification for specific details of MCT values	Y

Messages

Attribute	Description	Required
erase	If true, the task will erase all saved messages from the printer memory. If false, the saved messages will be maintained and no overwrite will be done if the position is already filled.(64KB default message storage space) Default: false	N
number	The position number for the message to be stored Accepted values: 1 to 255	Y
message	The string message to be stored in the printer.	Y

Logo

Attribute	Description	Required
erase	Defines if process will erase the previously stored logos Valid values: YES or NO	Y
slot.number	The number of the slot used to store the logo Valid values: 1- 255 (64KB default logo storage space)	Y
slot.filename	File name or URL of bitmap file. Various file formats may be supported, such as bmp, gif or jpeg files	Y
slot.width	Printed width of the logo to be performed. Values: <ul style="list-style-type: none">• LOGO_ASIS: Download logo with one logo pixel per dot• Other Values : Logo width expressed in dot units (height will be scaled in proportion of the defined width) Valid Values for Receipt : 1 – 576 Valid Values for SLIP: 1 – 472 Note: SLIP station will not print logos with a height higher than 40 dots.	Y
slot.station	The printer station to be used. May be either RECEIPT or SLIP	Y

NetworkConfig

Attribute Name	Attribute Value
autoipenable	Enables/disable the autoip selection. YES or NO
fixedipenable	Enables/disable the fixed ip selection. YES or NO
fixedipselected	Selects the network configuration to use when in fixedip mode. Values 1-4 decimal 1. fixed ip :: 10.0.0.95 with mask of 255.255.255.0 2. fixed ip : 192.168.1.95 with mask of 255.255.255.0 3. fixed IP 169.254.0.95 4. User Defined When enabled UserDefined you must specify the networkConfig options.
gateway	Sets a valid ipv4 address to be used as a gateway when in fixedip mode
hostname	Set the printer hostname to the desired value. Max 12 characters.
httpuserid	Set the UserId for the httpService on the printer.
httppw	Set the httpService password on the network printer.
ipv4fixedip	Sets a valid ipv4 ip address to be used by the printer as a fixed address.
snmpmanager1/snmppmanager2	Set the address for the SNMP manager service
subnet	Sets a valid ipv4 subnet address to be used when fixedip mode is enabled

Attribute Name	Attribute filePath
snmptrap1/2	Filepath to the SNMP trap file in the local machine to be used by the SNMP service

4.0 Problem Determination

The utility provides facility to gather trace information. You can selectively enable/disable traces as follows.

Enabling Trace:

1. Edit the 'jutil.properties' file

Windows

c:\program files\Toshiba\4610 Ethernet Printer Configuration Utility\jutil.properties

Linux

/opt/toshiba/4610Utility/etc/jutil.properties

2. Turn on the "com.ibm.jutil.tracing.TurnOnAllNamedTracers=ON" trace.

3. The location for the trace file is

Windows

<user>/.toshiba

Linux

"<HOME>/.toshiba" where <HOME> is the absolute path to the user's home directory.