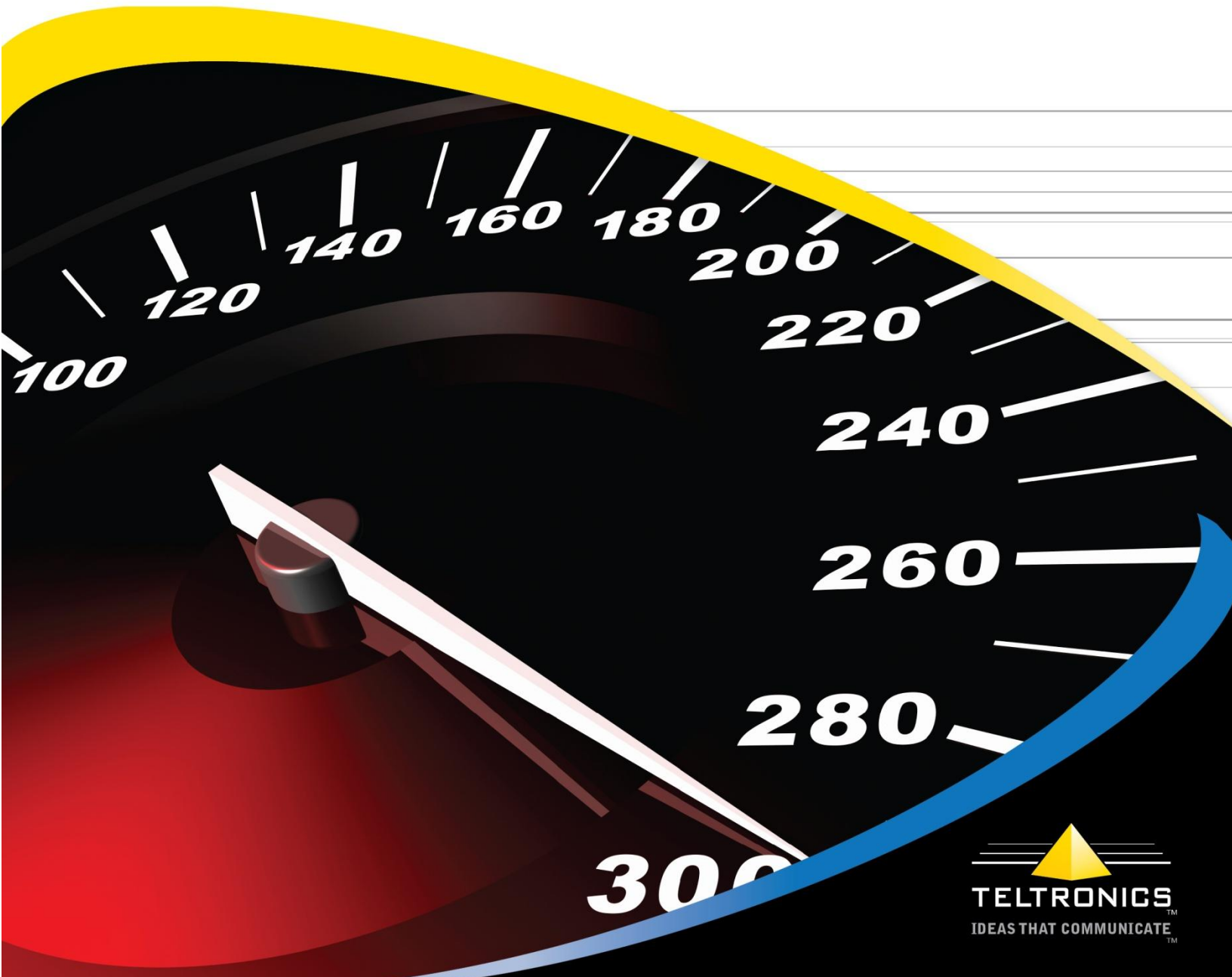


VCS_e 100
QUICK START GUIDE

Cerato[®]



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Part Number: 610-0000-0864 Rev D

Document Conventions

In order to keep everything about the installation and configuration of the VCSe 100 “quick”, we’ve adopted some graphics to help speed your way to the finish line!



STOP! What you are about to read is important information you will want to know prior to proceeding.



CAUTION! This may be a difficult concept or something to watch for as you proceed.



GO! You've reached the end of a step or procedure so move right ahead.



Follow the One-Way signs to reach the next step or process.



Follow the Flasher Arrows for steps or processes that continue across multiple pages.

Introduction

The Cerato VCSe 100 is a versatile, solid state communication server available in a variety of PSTN trunking models. This document is designed to assist the system administrator or installer to quickly and easily install and configure the VCSe 100 with minimal programming effort.

This guide outlines the steps required to:

- Install the VCSe 100 unit; on a shelf or in a rack.
- Install and configure a TFTP server application supplied on the resource CD

(New IP Phone features are constantly evolving with new capabilities coming out frequently. To take advantage of new phone enhancements, it is advantageous to have a TFTP server on the network to allow phones to download the latest software as it becomes available.)

- Install the Administrator Console software from the resource CD
- Configure the system IP address
- Modify inbound trunk routing
- Auto-provision and assign Arcata endpoints

Carton Contents



- ▲ VCSe 100 SIP Communication Server
- ▲ Rackmount Brackets
- ▲ Power Cord
- ▲ Null Modem Serial Cable
- ▲ Category 5 Ethernet Cable
- ▲ VCSe 100 Resource CD
- ▲ VCSe 100 License Sheet (Unit/Customer specific)
- ▲ VCSe 100 Quick Start Guide (this document)
- ▲ VCSe 100 Brochures

Installation Requirements



The following items are needed to complete the setup of the VCSe 100:

- 1) Null modem cable (See VCSe 100 Hardware and Installation Guide for details)
- 2) Computer with serial connector or USB Serial Adapter (not included)
- 3) Power over Ethernet (PoE) network switch supporting IEEE 802.3af OR an optional Teltronics PoE injector (Part # 929862).

Installation Location



The VCSe 100 can be installed in the following locations:

- 1) Desktop or shelf (customer provided)
- 2) In a standard, 19" equipment rack.

Power Requirement



Arcata endpoints are powered using PoE (802.3af). Ensure the IP network switch used for the Arcata endpoints supports this standard. Alternatively, optional PoE power injectors are available for purchase if a PoE IP network switch is not available.



All network infrastructure and equipment, including, but not limited to, the PoE switch, are the responsibility of the Strategic Partner or the customer.

PoE switches must supply sufficient power per port and for the total number of PoE devices connected. Arcata equipment power requirements are 2.6w for all phones except the Vision Video phone. The Vision Video phone power requirement is 10w.

Network Requirement



The VCSe 100 requires a 100MBps Switched Ethernet connection for both voice communication and administration.

Teltronics recommends that you use a static IP address for the VCSe 100. Please coordinate with the local network administrator to obtain the static IP settings. Record the settings in the Network Setting fields on the Quick Start Setting page at the back of this guide.

DHCP Settings

DHCP Option 66 is a method of providing the IP address of a local TFTP server. If this is available, the Arcata family of SIP endpoints will connect to the TFTP server defined in DHCP option 66 to obtain their initial configuration and firmware files, and to automatically provision with the VCSe 100.

DHCP support is not part of any software or hardware provided by Teltronics. Check with the Network Administrator to determine if DHCP option 66 is available for use. If so, can it be configured with the TFTP server IP address which the System Administrator will optionally install in Step 3?

If DHCP Option 66 is not available, the IP address of the TFTP server can be manually configured via the Web User Interface for each Arcata endpoint.



Step 1

Software Installations

The software installation consists of several components which must be performed in sequential order.

- Arcata SIP endpoint firmware.
- Trivial File Transfer Protocol (TFTP) Server (**not required for use with VCSE 100 Universal or VCSe 100 Analog 8-Port**, required to update firmware on Arcata family of endpoints, and for automatic provisioning on the VCSe 100 Analog and Digital) Teltronics uses a third party TFTP server app called TFTPd32. If available, an existing TFTP server can be used.
- Cerato Console (VCSe 100 Graphical User Interface)
- Java Runtime Environment (JRE) (required to run Cerato Console)
- VCse 100 & Arcata Documentation (Optional).

The Cerato Console and JRE are installed on the System Administrator's Microsoft® Windows PC. Teltronics recommends that you install the TFTP server on a network host PC machine which will always be online (24x7).

The Arcata endpoints will use DHCP option 66 or manual configuration using the Web Interface to find the TFTP server, download the latest firmware, and determine where the VCSe 100 is located in order to automatically provision.

Determine each of the following and record these settings on the Quick Start Setting Page at the back of this guide.

- Which local PC will be used by the System Administrator to program the VCSe 100?
- If there is an existing TFTP server on the network, can it be used for the Arcata SIP firmware and if so, what is the IP address? Or
- If there is not an existing TFTP server, what is the IP address of the machine that will be used to host the TFTP server? Coordinate this IP address with the network administrator as described in the section **Network Requirement**.





Step 2

Software Installations ➤ SIP Endpoint Firmware



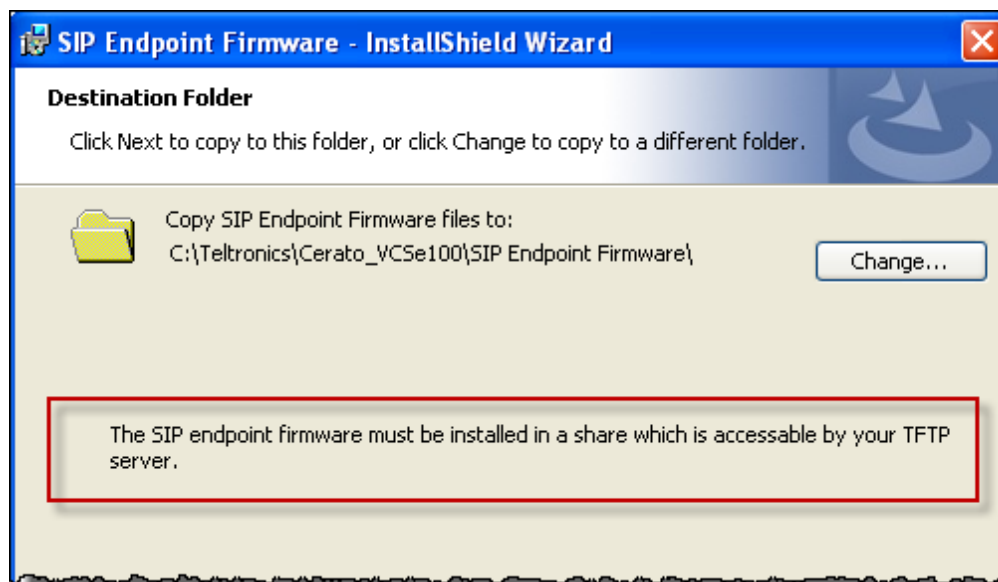
Skip this step if you are installing a VCSe 100 Universal or a VCSe 100 Analog 8-Port Communication Server. SIP Endpoint firmware is pre-loaded on these servers.

Insert the VCSe 100 Resource CD in the CD Drive on the PC identified for the TFTP Server installation in **Step 1**.

- 2.1 When the install screen is displayed, click the **Utilities** link.
- 2.2 Click the **SIP Endpoint Firmware** link to install the firmware on the TFTP server PC.
- 2.3 Proceed to follow the installation prompts.
- 2.4 When prompted, choose the folder where the firmware will be loaded. **This folder will become the root folder for the TFTP server installed in the next steps.**



The destination folder must be the same folder which will be configured in the section **Software Installation > Install & Configure TFTP Server**. The folder needs to be accessible on the same local area network on which the Arcata endpoints are installed in order to allow firmware updates and automatic provisioning.





Step 3

Software Installations ➤ Install & Configure TFTP Server



Skip this step if you are installing a VCSe 100 Universal or a VCSe 100 Analog 8-Port Communication Server. TFTP Server is pre-loaded on these servers.


If not already loaded, insert the Resource CD in the CD Drive of the PC identified for the TFTP Server installation in **Step 1**.

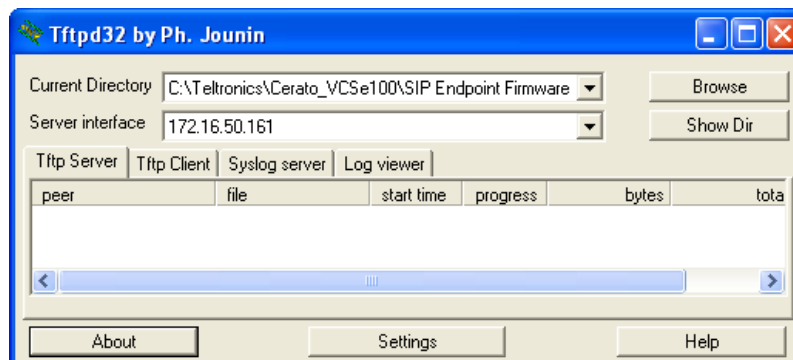
- 3.1 When the install screen is displayed, click the **Utilities** link.
- 3.2 Click the **TFTP Server** link to install the TFTP server.
- 3.3 Proceed to follow the installation prompts.



When the installation options window appears, select and set the **Type of Install** setting to **Installation & Start**.

The included TFTP Server is optional. However, installation of the TFTP Server is required to automatically download SIP endpoint firmware. Firmware can also be downloaded manually to each endpoint using the Administrative Web User Interface (WUI).

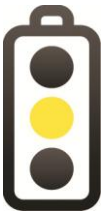
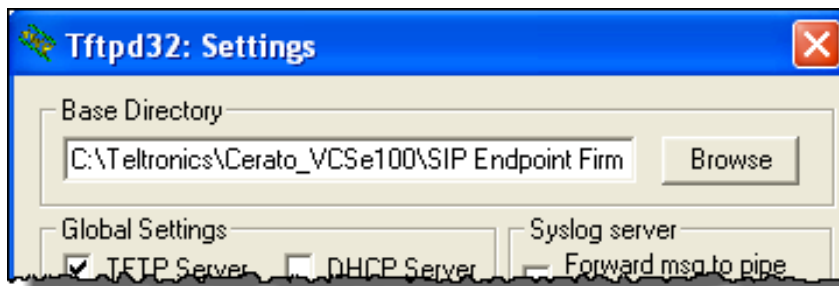
- 3.4 After the install, the TFTP32 server will open as an icon in the System Tray. 
- 3.5 Double-click the System Tray icon to display the TFTP32 application window.
- 3.6 In the TFTP32 application window, click on the **Settings** button.






Software Installations ➤ Install & Configure TFTP Server

- 3.7 When the TFTP32 Settings window is displayed, click on the **Browse** button and browse to the folder where the SIP Endpoint Firmware was installed previously.



The folder selected in this step must be the same folder where the SIP Endpoint firmware was installed in the previous step.

- 3.8 Click the OK button.
- 3.9 Ensure the same folder where the SIP Endpoint firmware is installed is listed in the Base Directory field and click the OK button.
- 3.10 Close the TFTP Server and then restart it from the **Start Button > Program Files** menu.
- 3.11 Ensure the TFTP32 server icon  is displayed in the system tray.
- 3.12 To ensure the TFTP server is always running on the installation PC, copy the TFTP Server shortcut to the Windows Startup folder.





Step 4

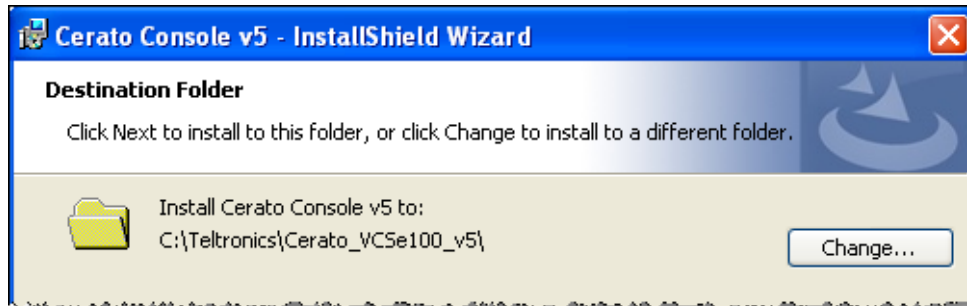
Software Installations > Cerato Console

If not already loaded, insert the Resource CD in the CD Drive on the PC identified for the Cerato Console Server installation in Step 1.

- 4.1 When the install screen is displayed, click the **Install Console** link.
- 4.2 On the Welcome screen, click the **Next >** button.
- 4.3 READ and Accept the license agreement when ready by clicking the **Next >** button.
- 4.4 If you need to change the destination folder, click the **Change** button, navigate to the desired folder and click **OK**. Otherwise, just click the **Next >** button.



Teltronics recommends that you do not change the destination folder.



- 4.5 On the Ready to Install Program window, click the **Install** button.



At this point the installation will either complete successfully OR you will be prompted to install the most current version of the Java Runtime Environment – which is a required component.

- 4.6 If the installation has completed successfully, please proceed to Step 6. Software Installations > VCSe 100 & Arcata Documentation.

- 4.7 Otherwise, continue to the next step.





Step 5

Software Installations > Java Runtime Environment*

**If needed*



You do not need to complete this step if the Cerato Console installation completed successfully.

If not already loaded, insert the Resource CD in the CD Drive on the PC identified for the Cerato Console Server installation in Step 1.

- 5.1 When the install screen is displayed, click the **Utilities** link.
- 5.2 Click the **Java Runtime Environment 32b** link.
- 5.3 Proceed to follow the installation prompts.



Step 6

Software Installations > VCSe 100 & Arcata Documentation*

**Optional*

If not already loaded, insert the Resource CD in the CD Drive on the PC identified for the Cerato Console Server installation in Step 1.

- 6.1 When the install screen is displayed, click the **Documents** link.
- 6.2 Click the **Install Documents** link OR click on the individual document links to view each document.





Step 7

Hardware Installation & IP Address Determination

The VCSe 100 can be mounted in a standard, 19" data communications rack using the rack-mount brackets included in the shipping carton.

- 7.1 After installing the VCSe 100 into the data rack, ensure the power switch is in the off position and connect the AC Power Cord to the power switch located on the back of the VCSe 100 Communication Server.
- 7.2 Connect the LAN port on the front of the VCSe 100, via Ethernet cable, to either A) Patch panel port connected to the data network backbone OR B) Directly to a network data switch.



The LAN port is identified as **LAN** on the front of the VCSe 100.

The VCSe 100 communicates via IP over the network to the SIP phones. You must have the IP address of the VCSe 100 to connect and start administering it. Initially the VCSe 100 gets its IP address using DHCP. If the network administrator is unable to provide the assigned IP address, you must connect to the VCSe 100 using the Console Serial Port (VCSe 100 Analog or Digital) or the Console RJ45 Port (VCSe 100 Universal or Analog 8-Port) on the front of the unit to determine the IP address.



The appropriate console cable is provided with each VCSe 100.





Hardware Installation & IP Address Determination

To determine the IP Address of the VCSe 100 :

- 7.3 Connect the null modem cable (included) between the Console Serial port on the front of the VCSe 100 and the serial port on your PC.
- 7.4 Use a serial communications application such as Windows HyperTerminal (recommended) to communicate with the VCSe 100 via the Console Serial port.

The serial connection settings are:

Baud rate: 9600

Data bits: 8

Parity: None

Stop Bits: 1

Flow Control: Hardware

- 7.5 After connecting to the VCSe 100 from within the communications application press the <CTRL><C> keyboard combination to get a "Ready>" prompt.
- 7.6 At the prompt, type 'status' then press the <ENTER> key to display the network address.

```
ready>status
Ethernet-LAN:      Online - 100 mbps, Full duplex
System Date/Time: 05-Jun-2010 10:41:33

DHCP Status:      Okay
  IP Address:      192.168.1.22 ←
  IP Netmask:      255.255.255.0
  IP Gateway:      192.168.1.1
```



Note: In the event that the local IP addresses are not provided via DHCP, the IP address will have to be set manually via the command line. Refer to section **Troubleshooting > DHCP Not Available** at the end of this guide.





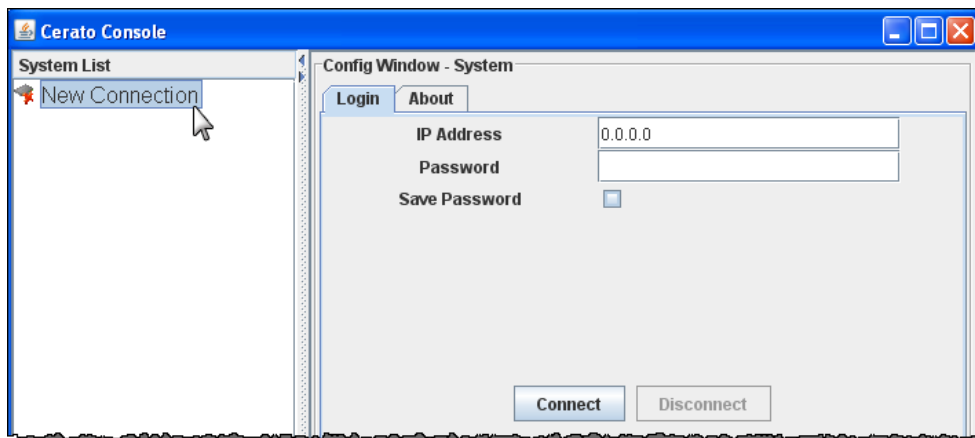
Step 8

Connect using the Cerato Console

The Cerato Console is the Administrative Interface for all VCSe 100 systems. The System Administrator can manage one or many VCSe 100's using a single Cerato Console session. To complete any configuration tasks on the VCSe 100 you must connect to it. Connecting to the VCSe 100 requires that the VCSe 100 IP address be accessible from the PC on which you installed the Cerato Console application.



- 8.1 Open the Cerato Console application by selecting it from **Start Button > Program Files** or by using the Desktop icon created during installation.
- 8.2 When the Cerato Console application window appears, click **New Connection** in the left-hand, System List pane.
- 8.3 Click the Login tab in the right-hand, Config Window-System pane and enter the appropriate data into the following fields:
IP Address = VCSe 100 IP Address previously established and entered on the Quick Start Setting page at the back of this guide.
Password = The default, case sensitive password of 'admin'.
Save Password = Check to enable password save for future connections.
- 8.4 Click the **Connect** button.





Step 9

Configure IP Settings

After you have connected to the VCSe 100, all of the system tabs are displayed at the top of the right-hand pane, titled Config Window-System and the configuration entities appear in the left-hand pane, titled System List.

- 9.1 Click on the **IP Settings/Time** tab in the right-hand, Config Window-System pane to display the IP Settings acquired from the DHCP Server.
- 9.2 Set the DHCP setting to “off” by clicking the radio button next to the **Off** setting. **By default, all other DHCP settings are automatically turned off.**
- 9.3 Change the IP Settings to the IP Address information previously acquired and noted on the Quick Start Settings page at the back of this guide.
- 9.4 The time server setting has been set by default to 64.90.182.55 with an offset in hours of (-5). This sets the time on the VCSe 100 to Eastern Daylight Savings Time (EST DST). You should change the offset to match your time zone. If you prefer to use a different time server, you can find a list of available time servers at <http://tf.nist.gov/tf-cgi/servers.cgi>.
- 9.5 After you have changed the IP settings, click on the **Save** button at the bottom of the Cerato Console screen, then click the **Reset** button when prompted.
- 9.6 Reconnect to the VCSe 100 (as described in Step 8) using the new IP address.





Step 10

Update Firmware & License

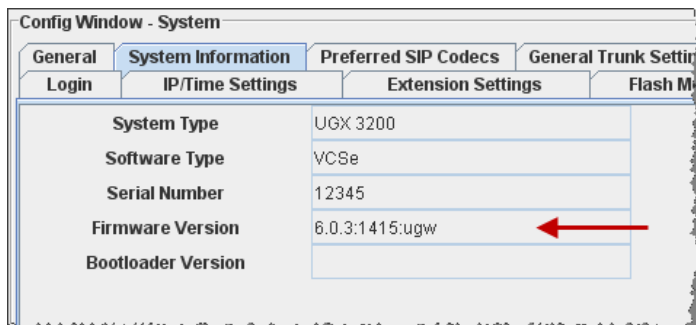
Your VCSe 100 may have shipped with an older version of firmware. Before making any additional changes to the VCSe 100 database, ensure your VCSe has the current firmware.

- 10.1 Check the Teltronics APEX Community Portal (<http://apex.teltronics.com>) for the latest firmware. In most instances the version posted on APEX is the version included on the Resource CD.
- 10.2 Ensure the license sheet included in the VCSe 100 box matches the current VCSe 100 firmware per the APEX Community Portal.



If prompted during the upgrade process to enter your license key, enter the corresponding version license key which is provided in the VCSe 100 box when shipped. Contact your distributor or Teltronics Technical Support for the current firmware license if the license sheet does not match the current firmware version.

- 10.3 Click on the System Information tab in the right-hand, Config Window – System pane to display the installed firmware version. Ensure that the installed firmware matches the released version.



- 10.4 If the installed firmware matches the released firmware proceed to the next step. If the installed firmware is older than the released firmware, click the **Reconnect After Upgrade** checkbox.
- 10.5 Click the **Upgrade VCSe Firmware** button and follow the prompts to complete the upgrade. For additional information regarding upgrading firmware, refer to the Cerato Console Help or the VCSe 100 Admin Guide.





Step 11

Common Configuration Files Settings

All Arcata endpoints retrieve files and firmware necessary for their functionality from the Configuration Server (also called TFTP Server). The Configuration Server runs internally on the VCSe 100 Universal and VCSe 100 Analog 8-Port servers. All other VCSe 100 models must use an external Configuration Server. The IP Address of the Configuration Server must be configured in the VCSe 100.

- 11.1 Click on the Configuration Server tab in the Config Window to display the Configuration Server settings.
- 11.2 If installing a VCSe 100 Universal or a VCSe 100 Analog 8-Port server, **leave the IP Address configured as 0.0.0.0 (See below)**. Otherwise, for all other models, enter the IP Address of the TFTP server. Then click on the **Save** button at the bottom of the Cerato Console. The VCSe 100 will now load common configuration files to the Configuration Server for SIP endpoints.

Config Window - System

Audio Prompts Configuration Server General System Information P

Login IP/Time Settings

Config Window - Configuration Server

| | |
|----------------|---------|
| IP Address | 0.0.0.0 |
| Port | 69 |
| Server Type | TFTP |
| User | |
| Admin Password | |

- 11.3 Click the **Reset** button if prompted and reconnect to the VCSe 100 after it has rebooted.





Step 12

Initiate Default Configuration



Initializing the Default Configuration, as described in Step 12, **MUST** be completed for the VCSe 100 Universal and the VCSe 100 Analog 8-Port servers. The process is **OPTIONAL** for all other VCSe 100 models and may be skipped if changing the default number scheme is not required.

If you are installing a VCSe 100 Universal you must install any optional FXS/FXO cards and initiate the default configuration. Refer to the VCSe 100 Installation and Hardware Guide for installation instructions of the FXS and/or FXO cards. After the cards are installed proceed with step 12.1.

- 12.1 Click the Resource Allocation tab in the right-hand, Config Window – System pane to show the Default Configuration settings screen.

Default Configuration

Enable Default Configuration

Default Extension Length 4

Default Extension Start Digit(s) 2000

Default Digital Trunk

| | |
|----|-------------------------------------|
| T1 | <input checked="" type="checkbox"/> |
| E1 | <input type="checkbox"/> |

Default Configuration

- 12.2 Click the **Enable Default Configuration** checkbox.
- 12.3 Select the desired Default Extension Length of 3, 4 or 5 digits.
- 12.4 Enter the Default Extension Start digits:
If the default extension length = 3 digits enter a single start digit.
If the default extension length = 4 digits enter the first two start digits.
If the default extension length = 5 digits enter the first three start digits.
- 12.5 If installing a VCSe 100 Universal or VCSe 100 Digital, the Default Digital Trunk check boxes are enabled. Select the desired default digital trunk by checking either the T1 or E1 check box (T1 is default).
- 12.6 Click the **Default Configuration** button, then the Reset button when prompted.





Step 13

Connect, Auto-Provision & Configure Arcata Endpoints

You are now ready to plug in the Arcata SIP endpoints and have them auto-provision with the VCSe 100. This process will “self register” the Arcata endpoints with the VCSe 100. Auto-provisioning will automatically assign an extension and model-specific template. Only the specific name and any additional features you want to add to each Arcata endpoint need to be programmed manually.

13.1 To auto-provision your Arcata endpoint(s), simply connect it to your network using a PoE data switch or the PoE injector.

Assuming the following are true, the Arcata endpoint will obtain the current firmware and common configuration files from the TFTP server and then auto-provision with the VCSe 100:

- The VCSe 100, TFTP server, and Arcata endpoints are all on the same network.
- DHCP option 66 has been set.
- The SIP Endpoint firmware has been loaded on the TFTP server.
- The TFTP server is actively running.
- The Configuration Server settings have been configured in the VCSe 100.



If DHCP option 66 is not available for use on the network OR if the TFTP server is not available on the network, please see the Troubleshooting section of this guide.

After the Arcata endpoints have auto-provisioned with the VCSe 100, they will appear in the Cerato Console under the Extensions entity.

13.2 Connect to the VCSe 100 using Cerato Console.

13.3 Click the key symbol next to the **Extensions** entity in the left-hand pane System List.

13.4 The Extensions entity will expand displaying all default and auto-provisioned endpoints. All new extensions added by auto-provisioning will appear at the bottom of the list and can be sorted by clicking on the Extensions entity header. Press Restore to refresh extension list.

NOTE: For more comprehensive endpoint configuration, including feature keys, class of service, and routing permissions refer to the VCSe 100 Administration Guide





Step 14

Configure Inbound Call Routing

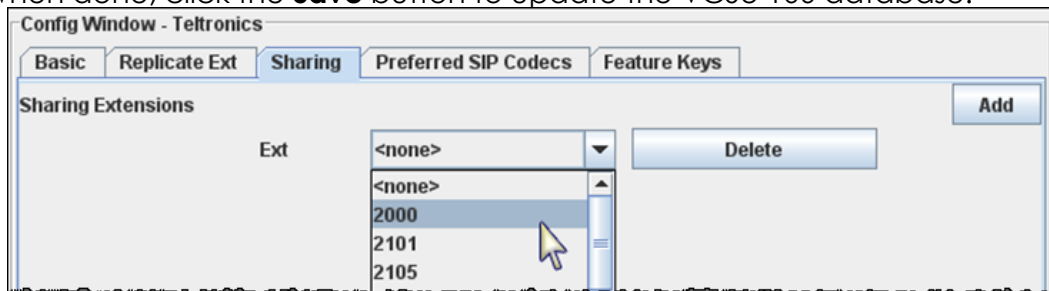
The VCSe 100 has a single default and three alternate routing options for all inbound trunk calls. This step covers each and describes how to modify the VCSe 100 to take advantage of the routing which suits your VCSe 100 installation best.

Option1 (Default) - All calls routed to default attendant extension

The Attendant extension (2000 by default) is configured as a virtual extension and when called will ring the primary extension on any and all system endpoints on which that extension is shared. The Attendant extension is programmed as a shared extension on all analog (FXS) stations created in the default configuration.

If your VCSe 100 is a digital model (no analog FXO facilities) or if you prefer to share the attendant extension with other endpoints, you must share the attendant extension on any and all extensions on which you want it to ring.

- 14.1.1 Connect to the VCSe 100 using the Cerato Console. Click the key symbol next to the Extensions entity in the left-hand pane, System List to expand the extension list.
- 14.1.2 Click on the extension you wish to edit.
- 14.1.3 Select the Sharing tab.
- 14.1.4 Click the Add button.
- 14.1.5 Select the Attendant extension from the Ext combo box.
- 14.1.6 Repeat steps 2-5 for each endpoint on which you want to share the Attendant extension.
- 14.1.7 When done, click the **Save** button to update the VCSe 100 database.



Refer to Call Flow 1 - [Route to Extension 2000 \(Operator\)](#) in the Call Flow section of this guide.

NOTE: If you want to remove the attendant extension from any endpoint, open the shared tab for the endpoint on which it is configured and click the Delete button next to the Attendant extension in the shared extension list.





Configure Inbound Call Routing

Option 2 - All calls routed to auto attendant based on Time of Day (ToD) routing

By default, all callers will be routed to the open call rules if the trunk call is presented to the VCSe on a Monday through Friday between 8am and 5pm. Calls outside those hours or on holidays will be routed to the appropriate schedule and call rules.

The auto attendant schedules, greetings and caller dial options all have default configurations. To modify the default settings refer to the VCSe 100 Administration Guide.

To change the inbound trunk call routing to the Auto Attendant:

- 14.2.1 Connect to the VCSe 100 using the Cerato Console.
- 14.2.2 Click on the key symbol next to the Classes of Service entity in the left-hand pane, System List and open the COS-Trunk Class of Service by clicking on it in the list.
- 14.2.3 In the Origination Destination Type box, select Collect and Route.
- 14.2.4 In the Origination Destination Name box, select CR-AA.
- 14.2.5 When done, click the **Save** button to update the VCSe 100 database.

| Config Window - Class of Service | |
|----------------------------------|-------------------|
| Basic Replicate COS | |
| Name | COS-Trunk |
| Class of Service Type | Trunk |
| Origination Destination Type | Collect and Route |
| Origination Destination Name | CR-AA |



Refer to Call Flow 2 - [Route to Auto Attendant Based on Time of Day \(ToD\)](#) in the Call Flow section of this guide.





Configure Inbound Call Routing

Option 3 - All calls routed to a Bridged Line Appearance (BLA) group*

**BLA is supported on Arcata models 2203, 2603 and 2806*

Four (4) virtual extensions (2501-2504) are configured by default in the VCSe 100 and are all members of an extension group. When a call is presented to the group it will ring the extensions on a first available basis. If all of the extensions in the group are busy, a call routed to the group will automatically route to General Mailbox 2000. To pick up calls from General Mailbox 2000, dial *2000 and when prompted enter the default PIN 5555.

You might want to choose this option when routing inbound calls to only two or more extensions. The benefit of BLA call routing is that a call presented to a BLA extension may be put on hold on one endpoint and picked up on another if the two endpoints share the same BLA extension. This functionality is similar to that of key system line appearances.

By default no BLA extensions are assigned to any endpoints.

To route all calls to a BLA group, you must first add BLA extensions to the Arcata 2806.

- 14.3.1 Select the extension from the Extension list in the System List.
- 14.3.2 In the Configuration window, check the BLA check box next to Lines 2, 3, 4, & 5.
- 14.3.3 Select extensions 2501, 2502, 2503 and 2504 from combo boxes Line 2, Line 3, Line 4 and Line 5 respectively.
- 14.3.4 Change the routing to the BLA call group by clicking on the key next to the Classes of Service entity in the System List, and open the COS-Trunk Class of Service by clicking on it in the list.
- 14.3.5 In the Origination Destination Type combo box select Collect and Route.
- 14.3.6 In the Origination Destination Name combo box select CR-BLA-Group.
- 14.3.7 When done, click the **Save** button to update the VCSe 100 database.

The screenshot shows a window titled "Line Keys" with a sub-section for "BLA". It contains a table with columns for Line, Extension Number, BLA checkbox, Name, and Name input field. Red arrows point to the BLA checkboxes for Lines 2, 3, 4, and 5, which are all checked.

| Line | Extension | BLA | Name | Name |
|--------|-----------|-------------------------------------|------|------|
| Line 2 | 2051 | <input checked="" type="checkbox"/> | ← | |
| Line 3 | 2052 | <input checked="" type="checkbox"/> | ← | |
| Line 4 | 2053 | <input checked="" type="checkbox"/> | ← | |
| Line 5 | 2054 | <input checked="" type="checkbox"/> | ← | |
| Line 6 | <none> | <input type="checkbox"/> | | |



Refer to Call Flow 3 – [Routing to a BLA Extension Group](#) in the Call Flow section of this guide.

NOTE: Each extension can only be selected once as a BLA extension on each Arcata endpoint, however they can each be assigned as a BLA on multiple Arcata endpoints.





Configure Inbound Call Routing

Option 4 - All calls routed to a BLA group based on Time of Day (ToD) scheduling*

**BLA is supported on Arcata models 2203, 2603 and 2806*

You can route calls to a BLA group based on Time of Day routing. By default, all callers will be routed to the BLA call group during business hours or treated by the closed and holiday auto attendant when calls are received outside of business hours.

To route calls to the BLA group based on Time of Day:

- 14.4.1 Follow the steps in **Option 3** – All calls routed to a Bridged Line Appearance (BLA) group to set up the BLA groups on the destination endpoints.
- 14.4.2 When you get to step 14.3.6, in the Origination Destination Name combo box select CR-BLA-Group-Sch.

| Config Window - Class of Service | |
|----------------------------------|-------------------|
| Basic Replicate COS | |
| Name | COS-Trunk |
| Class of Service Type | Trunk |
| Origination Destination Type | Collect and Route |
| Origination Destination Name | CR-BLA-Group-Sch |

- 14.4.3. When done, click the **Save** button to update the VCSe 100 database.



Refer to Call Flow 4 – Route to a BLA Group Based on Time of Day (ToD) in the Call Flow section of this guide.





Step 15

Digital Trunk Configuration

The Digital Trunk interface on the VCSe 100 is wired to telecom industry standards. A standard RJ48 T1 connector cable is required between the T1/E1 interface and the telecom demarcation.

To configure the trunk on the VCSe 100:

- 15.1 Connect to the VCSe 100 using the Cerato Console.
- 15.2 Click the key symbol next to the **Trunk** entity in the left-hand pane, System List. The Trunk entity will expand displaying the default "T1" trunk.
- 15.3 Select T1 from the list.
- 15.4 Make edits to the T1/PRI settings per your carrier's configuration.

| Config Window - T1 ISDN | |
|-------------------------|--|
| Basic Channels Gain | |
| Trunk Type | T1 ISDN |
| Name | T1 |
| Class of Service | <none> |
| Preferred Coding | <none> |
| Audio Companding | <input type="radio"/> A-law <input checked="" type="radio"/> Mu-law |
| Reference Clock | <input type="radio"/> Internal <input checked="" type="radio"/> External |
| Hunt Mode | Homing Forward |
| Protocol | National ISDN-2 |
| Side | <input type="radio"/> Network <input checked="" type="radio"/> User |
| Framing Method | <input checked="" type="radio"/> ESF <input type="radio"/> D4 |
| Line Coding | <input checked="" type="radio"/> B8ZS <input type="radio"/> ZCS |
| Line Build out | Short Haul |
| Short Haul Length | 100 |



To configure a trunk you must coordinate the trunk settings with your telecom carrier.

Congratulations!

**You've completed the installation of the
VCSe 100 in record time!**

Please refer to the VCSe 100 Administration Guide for more detailed configuration settings.

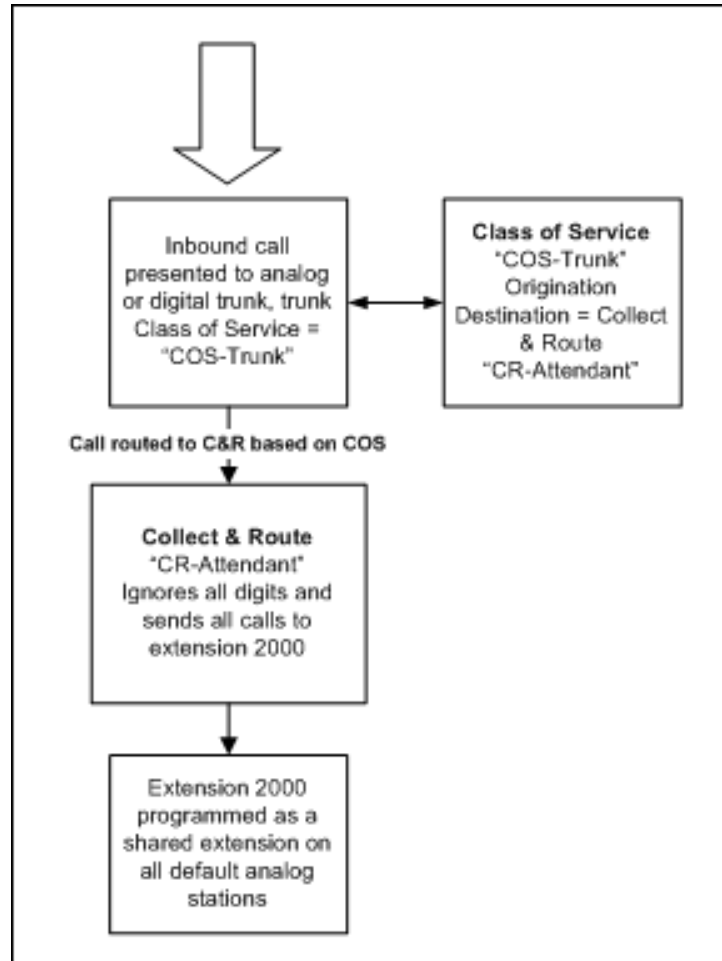
**For assistance, contact Teltronics Technical Support in the United States at 800-444-7434 or
outside the United States at +1 678-581-8060.**

**Note that you will need your customer or dealer PIN for support. Please contact your sales
person if you do not have a PIN.**

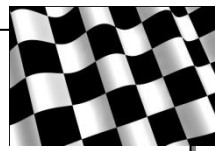
Inbound Call Routing Flows ➤ Call Flow 1



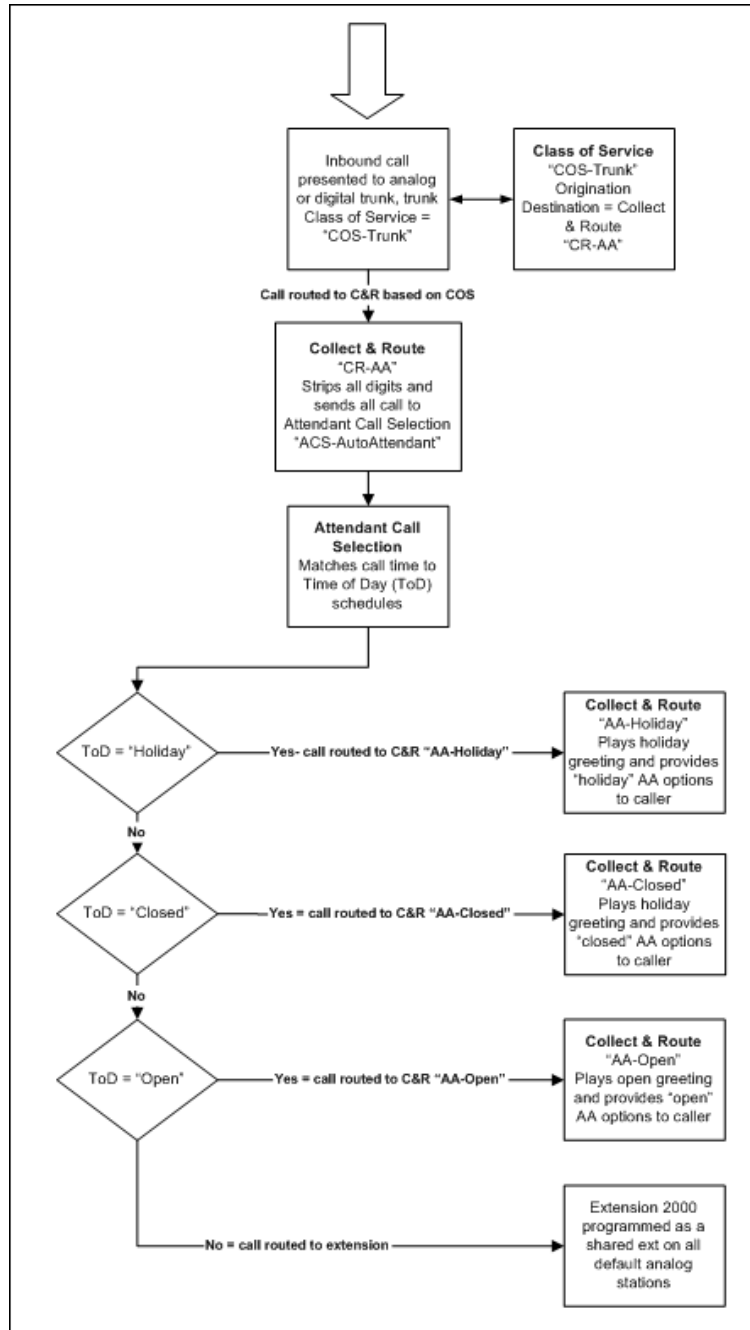
Option1 (Default) - All calls routed to attendant extension 2000



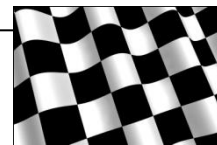
Inbound Call Routing Flows ➤ Call Flow 2



Option 2 - All calls routed to auto attendant based on Time of Day (ToD) routing

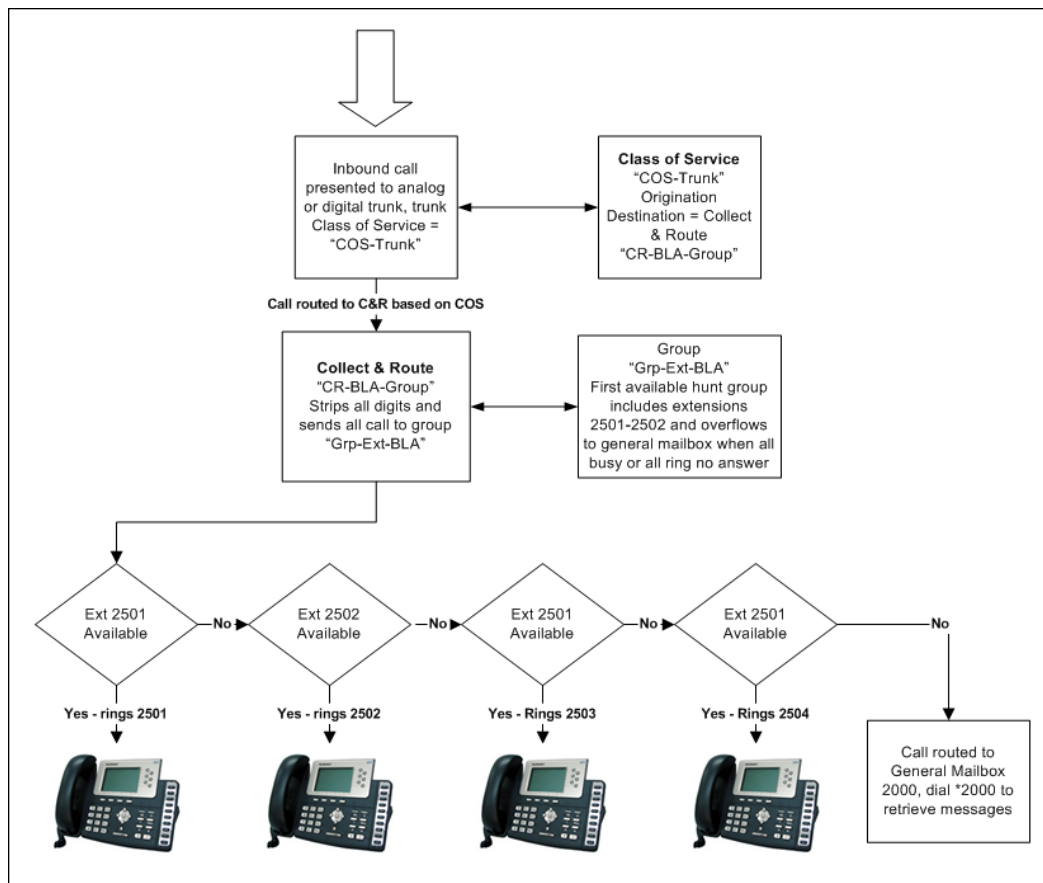


Inbound Call Routing Flows > Call Flow 3



Option 3 - All calls routed to a Bridged Line Appearance (BLA) group*

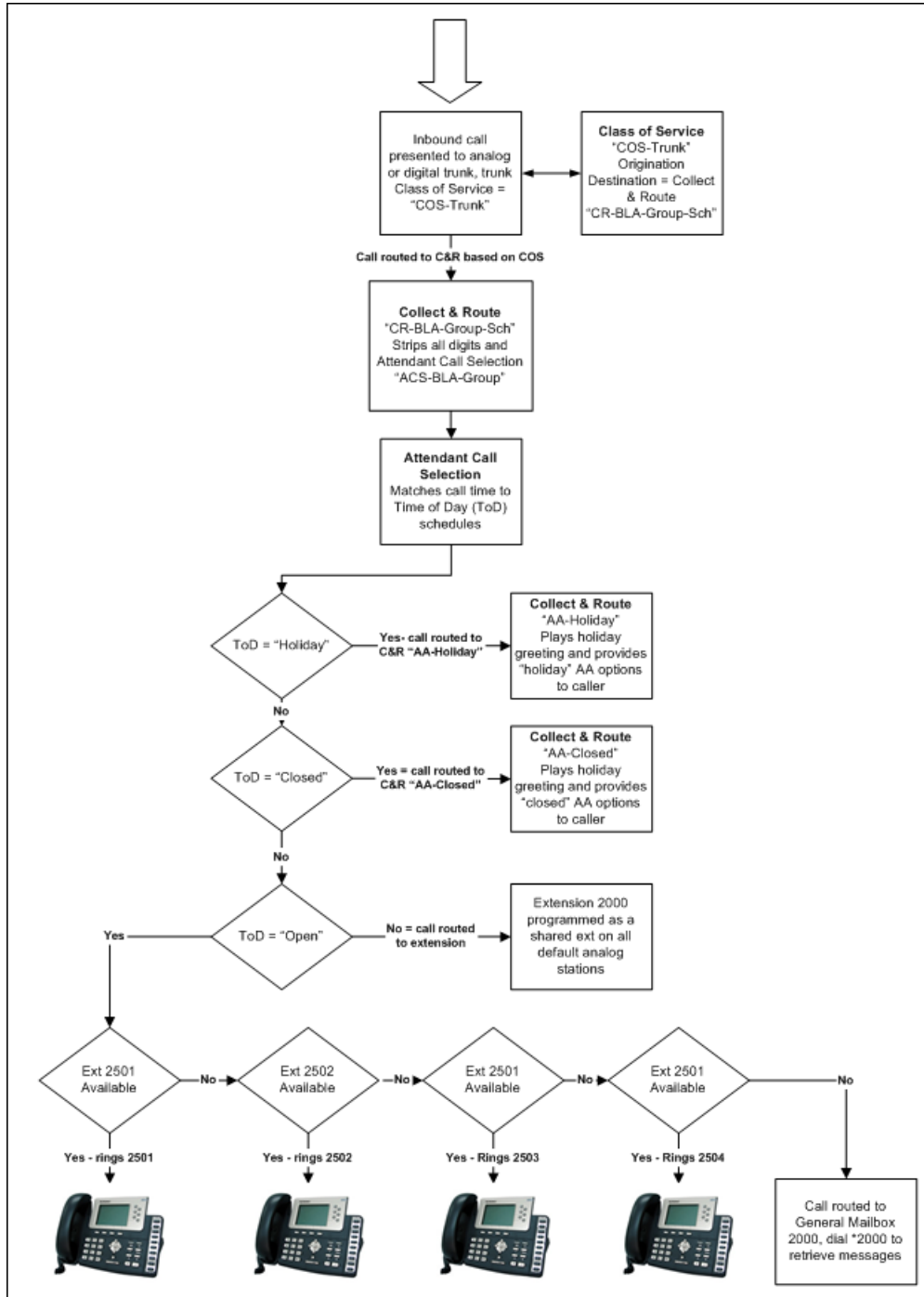
*BLA is supported on Arcata models 2203, 2603 and 2806



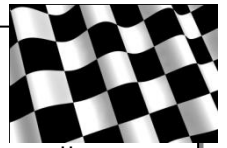
Inbound Call Routing Flows ➤ Call Flow 4



Option 4 - All calls routed to a BLA group based on Time of Day (ToD) scheduling*
**BLA is supported on Arcata models 2203, 2603 and 2806*



Troubleshooting ➤ DHCP Not Available



The network settings for the VCSe 100 must be set manually if DHCP is not available on the local network.

To do this, connect to the VCSe 100 via the Console Port as described in the **Hardware Installation and IP Address Determination (Step 7)** section of this guide.

Use the following sequence of commands at the “Ready >” prompt to set and verify the network settings :



When following the instructions below, the following color text is defined as below :

Black text = Prompts and text generated by VCSe 100

Red text = What you need to type

Blue text = Instructions or Information you may need

<ENTER> = Press the <ENTER> key on the keyboard

```
ready>login admin <enter>
```

```
Password:admin <enter>
```

```
admin>ip dhcp <enter>
```

Configuration changes have not been saved

Type 'save' to save changes.

```
admin> save <ENTER>
```

```
admin> ip addr 192.168.1.10 <ENTER>
```

Enter locally provided IP address

Configuration changes have not been saved

Type 'save' to save changes.

```
admin> save <ENTER>
```

The unit must be rebooted for changes to take effect.

Type 'reboot' to reboot the unit.





Troubleshooting > DHCP Not Available

admin> **ip netmask 255.255.255.0 <ENTER>** **Enter locally provided Netmask**

Configuration changes have not been saved
Type 'save' to save changes.

admin> **save <ENTER>**

The unit must be rebooted for changes to take effect.
Type 'reboot' to reboot the unit.

admin> **ip gateway 192.168.1.1 <ENTER>** **Enter locally provided Gateway**

Configuration changes have not been saved
Type 'save' to save changes.

admin> **save <ENTER>**

The unit must be rebooted for changes to take effect.
Type 'reboot' to reboot the unit.

admin> **reboot <ENTER>**

Teltronics 20-20 Telephony Board Loader (Oct 5 2010, 19:43:57)

FPGA Version: 0400

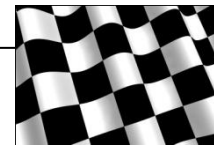
Teltronics Cerato Digital VCSe 100 – Ready

Software Version: 4.5.6:1170:DVCSe

After reboot press <CTRL><C>

ready>





Troubleshooting ➤ DHCP Not Available

ready> list <ENTER>

Verify the changes have been correctly applied. Repeat previous steps when changes have not been correctly entered and applied. The changes per this example are correctly listed in the following graphic.

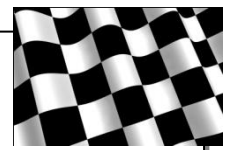
```
Teltronics 20-20 Telephony Board Loader (Oct  5 2010, 19:43:57)
#

FPGA Version: 0400
Teltronics Cerato Digital VCSe 100 - Ready
Software Version: 4.5.6:1170:DVCS
ready>status
Ethernet-LAN:      Online - 100 mbps, Half duplex
System Date/Time: (not set)

ready>list
System Type:      Digital VCSe 100
Software Type:    Digital VCSe 100
Serial No.:       18043
License Key:      0308-f58f-f799-59aa-c429-519d
Max SIP Endpoints: 64
Max 3rd Party SIP Endpoints: 9
Number SIP Endpoints Used: 1
Software Version: 4.5.6:1170:DVCS
Phone Firmware:   CIP210, Arcata
System Name:
Ethernet-LAN MAC: 00:01:d8:00:8c:f6
Ethernet Mode:    Auto
IP Address:       192.168.1.10
IP Netmask:       255.255.255.0
IP Gateway:       192.168.1.1
Time Server:      64.90.182.55
Time Offset:      -4.0 hours
DNS Server:       0.0.0.0
DNS Domain:       <none>
Public IP:        <none>
INServer:         <disabled>
UDP Audio Ports: 10000-14999 (5000 ports)
Jitter Buffer:    10/50/140 msec (min/nominal/max)
Default VIF Size: 30 msec

911 call Location Warning Information sent to CIP phone users:
WARNING Unknown - See Administrator
```

Troubleshooting > DHCP Option 66 Not Available



If DHCP Option 66 is not available to automatically define the location of the TFTP server, the following steps can be taken to add the location of the TFTP server to the Arcata endpoints. Not having immediate access to the TFTP server has two ramifications –

- 1) Arcata endpoints are not able to automatically retrieve current firmware and configuration information.
- 2) Arcata endpoints are not able to auto-provision with the VCSe 100.

To manually add the TFTP Server IP Address :

1. Determine the IP address of the Arcata endpoint after it has booted by pressing the **OK** button on the phone navigation pad. The IP Address, MAC Address, and Firmware Version are displayed.
2. Open a web browser and input the IP Address as the web site address and press <ENTER>. Your web browser will be redirected to the Arcata endpoint web interface.
3. When prompted, enter the default username 'admin', and default password 'admin' (case sensitive).



The password will change after the phone has auto-provisioned with the VCSe 100. Refer to the VCSe 100 Administration Guide for the configured password.

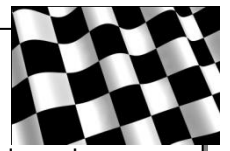
4. Once connected, click the **Upgrade** tab, then the **Advanced** sub-window to display the **Advanced Provisioning Configuration** window.
5. Enter the IP address of the TFTP server from the Quick Start Settings page located in this guide, in the "URL" field.



Correct syntax for the URL field is "tftp://nnn.nnn.nnn.nnn" where the TFTP or VCSe 100 Universal IP Address is substituted for **nnn.nnn.nnn.nnn**.

6. Select **Power on + Repeatedly** from the Check New Config combo box.
7. Click the **Confirm** button.
8. After the window has refreshed, click the **Auto Provision** button and confirm the action by clicking the **OK** button in the confirmation dialog.
9. The phone will now reboot and look to the TFTP server for new firmware and configuration information, and then auto-provision with the VCSe 100.

Troubleshooting > No TFTP Server Available



When no TFTP server is available, the Arcata endpoints cannot automatically download new firmware or auto-provision with the VCSe 100. The firmware can be upgraded manually, if necessary.

1. Open a web browser and input the endpoint IP Address as the web site address and press <ENTER>. Your web browser will be redirected to the Arcata endpoint web interface.
2. When prompted enter the default username 'admin', and default password 'admin' (case sensitive).



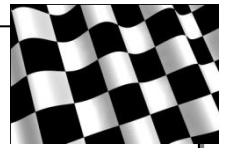
The password will change after the phone has auto-provisioned with the VCSe 100. Refer to the VCSe 100 Administration Guide for the configured password.

3. Once connected, click on the **Upgrade** tab, then the **Basic** sub-window to display the **Basic Provisioning Configuration** window.
4. Click on the **Browse** button and navigate to the resource CD to load firmware files. Firmware files on the Resource CD are located in the Phone_Firmware folder.
5. Locate the firmware for the specific Arcata endpoint model desired. Click **OK** on the browse window.

| Arcata Model | Firmware Name |
|--------------|---------------|
| 1801 | T18.rom |
| 2203 | T22.rom |
| 2603 | T26.rom |
| 2806 | T28.rom |
| Vision Video | 2009.rom |

6. Click the **Upgrade** button to upgrade the Arcata endpoint.
7. Refresh the web browser after the Arcata endpoint firmware has been upgraded.
8. Once connected, click the **Upgrade** tab, then the **Advanced** sub-window to display the **Advanced Provisioning Configuration** window.
9. Enter the IP address of the VCSe 100 from the Quick Start Settings page located in this guide, in the "URL" field.
10. Select **Power on + Repeatedly** from the Check New Config combo box.
11. Click the **Confirm** button.
12. After the window has refreshed, click the **Auto Provision** button and confirm the action by clicking the **OK** button in the confirmation dialog.
13. The phone will now reboot and auto-provision with the VCSe 100.

Quick Start Settings



The following settings should be established prior to starting the installation and configuration of the VCSe 100 Communication Server.

VCSe 100 IP Address : _____

VCSe 100 Subnet Mask : _____

VCSe 100 IP Gateway : _____

VCSe 100 IP Primary DNS : _____

VCSe 100 IP Secondary DNS : _____

TFTP Server IP Address : _____

SIP Endpoint Firmware &
TFTP Server Root Destination
Folder location : _____

NOTES:



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800.434.8358

www.vcse100.com

Part Number: 610-0000-0864 Rev C