

## Deploying a Call Accounting Solution with Infortel/ISI Services

This application note provides guidelines and configuration instructions for the Cisco® Unified Communications 500 Series for Small Business and the Infortel®-ISI Call Reporting Service.

The file accounting feature in the Cisco Unified Communications 500 Series provides a method for capturing accounting records in comma separated value (CSV) format and storing the records to a file in internal flash memory or to an external FTP server. Infortel provides a “cloud-based” service, where public FTP servers can be used to collect such records. That information is later processed and analyzed to demonstrate customer call trends, employee or department usage, fraud, misuse, or abuse, and employee productivity. The data can be presented through a customizable, user-friendly business portal, which is the service that ISI offers.

The information in this document applies to Cisco Configuration Assistant Version 2.1 or above and Cisco Unified Communications 500 Series software pack Version 7.0.3 and up.

## Scope and Assumptions

The information in this application note is intended for use by Cisco small and medium-sized VARs and Cisco SMB Specialized Partners. We strongly recommend that users have a Cisco Express Foundation Specialization. It is assumed that users are familiar with configuration of voice and security features on the Cisco Smart Business Communications System (SBCS) and are also familiar with the Cisco IOS® command-line interface. It is also assumed that users are familiar with fundamental data and voice networking.

The scope of this application note is limited to configuration of the file accounting functionality for call reporting service with ISI. This document does not cover configuration of additional or optional voice and networking features. The customization and configuration options for the ISI Business Portal are also outside of the scope of this document.

The procedures in this application assume the following:

- Each site has been provisioned for WAN connection to the Internet.
- Each site has been provisioned for voice users and for public switched telephone network (PSTN) termination (if required).

The information in this document applies to Cisco Configuration Assistant Version 2.1 or above and Cisco Unified Communications 500 Series software package Version 7.0.3 or above.

## Description of the ISI Service Offerings and Documentation

Infotel Select in conjunction with the Cisco Unified Communications 500 Series for Small Business provides valuable call reporting and statistics to Cisco customers. Infotel enables customers to manage telecom expenses by tracking call trends, identifying potential fraud, misuse, or abuse, and tracking adherence to telecom budgets for employees or departments. The Business Intelligence (BI) reporting capabilities of Infotel are of particular interest to small business users of Unified Communications 500 Series. The BI reports enable companies to track employee productivity, monitor phone interactions with customers and ensure customers are able to contact them through real-time reporting on Trunk Seizure Activity, Abandoned Calls and Time in Queue.

Infotel Select for Cisco Unified Communications 500 Series is offered in Basic or Enhanced packages. The Enhanced version offers additional reports, support, and training. Table 1 compares the features of the Basic and Enhanced versions. ISI is offering a free, 60-day evaluation of the Basic version.

| Features   | Infotel Select Basic Version  | Infotel Select Enhanced Version   |
|--|---|---|
| <b>Evaluation</b>  | Free, 60-day evaluation period is available.  | No evaluation period is available. ISI will immediately assume administrative responsibilities not available to the Infotel Select UC 500 Basic customer.                                     |
| <b>Web-based Access to the Infotel Select Call Reporting Application</b> | Full access provided to up to two administrators  | Full access provided to up to two administrators; customized access provided to named customer staff members for access to call details for specific modules, departments, and/or extensions. |
| <b>Call Detail Reports Delivered by Email</b>                            | Seven scheduled reports (preselected by ISI)  | Ten scheduled reports (chosen by the customer)  |
| <b>Training</b>  | 1.5-hour web-based group training on a demonstration system using demonstration data; up to 2 hours of additional refresher training and "how-to" discussions throughout the year; additional training is available for an additional fee | 2 hours of one-on-one web-based training on customer's system with customer's data; up to 8 hours of additional refresher training and "how-to" discussions throughout the year               |
| <b>Documentation</b>   | Access to ISI's Quick Reference Guides and Frequently Asked Questions at <a href="http://www.isi-info.com/support/support.htm">www.isi-info.com/support/support.htm</a>   | Access to ISI's Quick Reference Guides and Frequently Asked Questions at <a href="http://www.isi-info.com/support/support.htm">www.isi-info.com/support/support.htm</a>                       |
| <b>Directory Configuration and Ongoing Updates</b>                       | Customer configures and maintains all directory information, including assignment of extension to person and/or departments   | ISI performs the initial configuration of the customer's directory and maintains it with any updates/changes provided.  |
| <b>Call Rating</b>   | Standard tariff rating  | Customized rating<br><br>ISI will configure the system with customer-provided rates for call types, such as 6 cents per minute for long distance calls  |
| <b>Monthly Review of Reports</b>   | Consultative Review of Monthly Reports is available for an additional   | Consultative Review of Monthly Reports is included with Infotel Select Enhanced   |

The complimentary reports selected by ISI are as follows:

- Detail by Extension: delivered weekly
- Extension Summary: delivered daily
- Executive Summary: delivered monthly
- Call Activity Overview: delivered monthly
- Frequently Dialed Numbers: delivered weekly
- Transfer Report: delivered daily
- Abandon Ring Time Summary: delivered daily

## Signing-up for the ISI Telemangement Service

Before configuring the system to start sending Call Detail Records (CDR) to the ISI public FTP servers, VARs need to obtain an account to access the ISI Business Portal. The registration process is very simple:

1) Access the ISI Business Portal at:

<https://www.isi-info.com/uc500/dealer.aspx>

Figure 1 shows the dealer registration form.

Figure 1 Dealer Registration Form

ISI Telemangement Solutions, Inc.  
Connecting communications with profitability

### Dealer Registration

Welcome to the registration portal for ISI's 60-day FREE evaluation of Infortel® Select UC500  
*Helping Cisco customers optimize their Unified Communications investment!*

First Name:  \* Last Name:

Company:

Address 1:

Address 2:

City:  State:  Zip:

Phone:  Email:

 ISI Telemangement Solutions is a Cisco Technology Developer Partner dedicated to helping Cisco customers get the most out of their Unified Communications investment!

Dealer Portal Support  
800.915.1995

2) Fill out the required information and submit your application. Each applicant will enjoy 60 days of free basic service.

3) After you have received a confirmation, you can proceed to the end-customer registration page (Figure 2).

Figure 2 Customer Registration Form



## Customer Registration

Please fill in the customer information below.

|   |                      |                      |                      |
|---|----------------------|----------------------|----------------------|
| Company:  | <input type="text"/> | Vertical:            | <input type="text"/> |
| First Name:                                     | <input type="text"/> | Last Name:           | <input type="text"/> |
| Address 1:                                      | <input type="text"/> |                      |                      |
| Address 2:                                      | <input type="text"/> |                      |                      |
| City:   | <input type="text"/> | State:               | <input type="text"/> |
| Phone:  | <input type="text"/> | Email:               | <input type="text"/> |
| Additional Email Addresses for Report Delivery: | <input type="text"/> | <input type="text"/> |                      |
| System Configuration: are you using:            | <input type="text"/> |                      |                      |
| Area Code:                                      | <input type="text"/> | Exchange:            | <input type="text"/> |

Submit



ISI Telemangement Solutions is a Cisco Technology Developer Partner dedicated to helping Cisco customers get the most out of their Unified Communications investment!

Dealer Portal  
Support  
800.915.1995


### Important Notes:

- The **System Configuration** field refers to the actual Cisco Unified Communications 500 Series SKU deployed at this customer's site.
- The **Area Code** must reflect the first three digits of the full E.164 main telephone number for this customer.
- **Exchange** corresponds to the next three digits of the main telephone number for this customer.

4) Complete registration by entering the credentials to access the FTP server (Figure 3).

### **Figure 3 Configuring the Cisco Unified Communications 500 Series for Infortel FTP Server Access**

**ISI Telemangement Solutions, Inc.**  
Connecting communications with profitability



**Almost done...**

The final step in the registration process is to configure the UC500 to send CDR (Call Detail Records) to the Infortel Select Call Reporting application at ISI's Data Center (approximately 10 - 15 minute configuration process).

Please take note of the following information. It will be needed during the configuration process:

|                       |                                   |
|-----------------------|-----------------------------------|
| <b>FTP location:</b>  | bsftp.isi-info.com                |
| <b>FTP folder:</b>    | <will be provided by the website> |
| <b>FTP user name:</b> | <will be provided by the website> |
| <b>FTP password:</b>  | <will be provided by the website> |

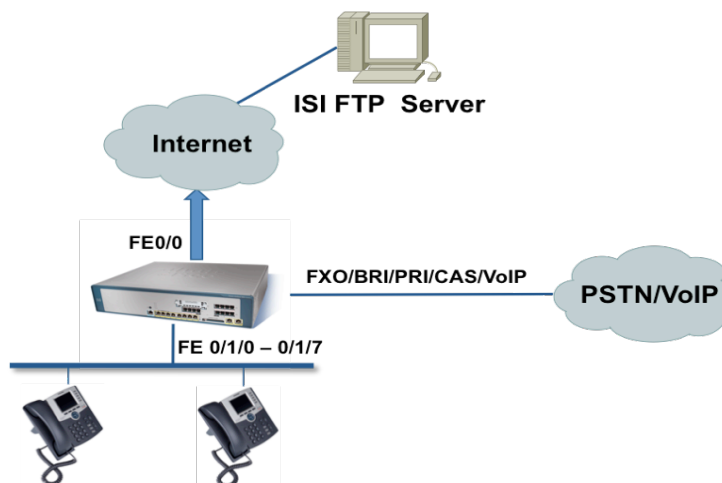
Please click [here](#) for the instructions on how to configure the UC500 to push CDR to ISI:

This information will be used later to configure the Unified Communications 500 Series.

## Basic Network Topology

Figure 4 illustrates the most common deployment scenario for Cisco Unified Communications 500 Series and the ISI service.

**Figure 4 Basic Network Topology for Cisco Unified Communications 500 Series and the ISI Service**



The Cisco Unified Communications 500 Series needs to be connected to the Internet and FTP traffic must be allowed through any device between the Cisco Unified Communications 500 Series and the WAN link. Dynamic Name Server (DNS) must be configured on the Unified Communications 500 Series.



## Configuring the Cisco Unified Communications 500 Series to Integrate with the ISI Reporting Service

The configuration involves the following steps:

- 1) Open a console session to the Unified Communications 500 Series. To do this:
  - a. Use an Ethernet cable to connect your PC to one of the LAN ports on the Unified Communications 500 Series.
  - b. Open the Cisco Configuration Assistant and connect to the UC 500. Then navigate to **Applications > Call Accounting** and fill out the appropriate fields below. Replace *username* and *password* variables with the credentials you obtained from ISI.

The screenshot shows the 'Call Accounting' configuration window in the Cisco Configuration Assistant. The window has a blue title bar with the text 'Call Accounting' and standard window control buttons (minimize, maximize, close). The main content area is divided into several sections:

- Devices:** A dropdown menu for 'Hostname' is set to 'UC520'.
- Enable Call Accounting:** A checkbox is checked and highlighted with a green box.
- Call Accounting Server:** Three text input fields are present:
  - 'FTP URL:' contains 'bsftp.isi-info.com'.
  - 'Username:' contains 'user'.
  - 'Password:' contains '\*\*\*\*\*'.
- Flash Backup:** An information icon is followed by the text 'Call Accounting Data Records are stored in flash:/cdr/'. Below this, a text input field for 'Flash Backup Filename:' contains 'flash:isi'. A 'Copy CDR to Flash' button is located below the input field.

At the bottom of the window, there are five buttons: 'OK', 'Apply', 'Refresh', 'Cancel', and 'Help'. Below the main configuration area, there is a label 'Original value:' followed by a blank space.

- 2) Click Apply and then OK to submit the changes.

## Testing Your Configuration

Perform a test push of CDR from the Cisco Unified Communications 500 Series to the bsftp.isi-info.com location using the following commands:

```
UC520#file-acct flush with-close
UC520#file-acct reset
```

Enable the following debug processes to monitor the FTP and CDR activity:

```
debug voip fileacct
debug voip dump-file-acct
debug ip ftp events
terminal monitor
```

The debug output is very verbose, but also very easy to interpret. If the FTP debug commands display "OK," the file transfer has completed successfully.

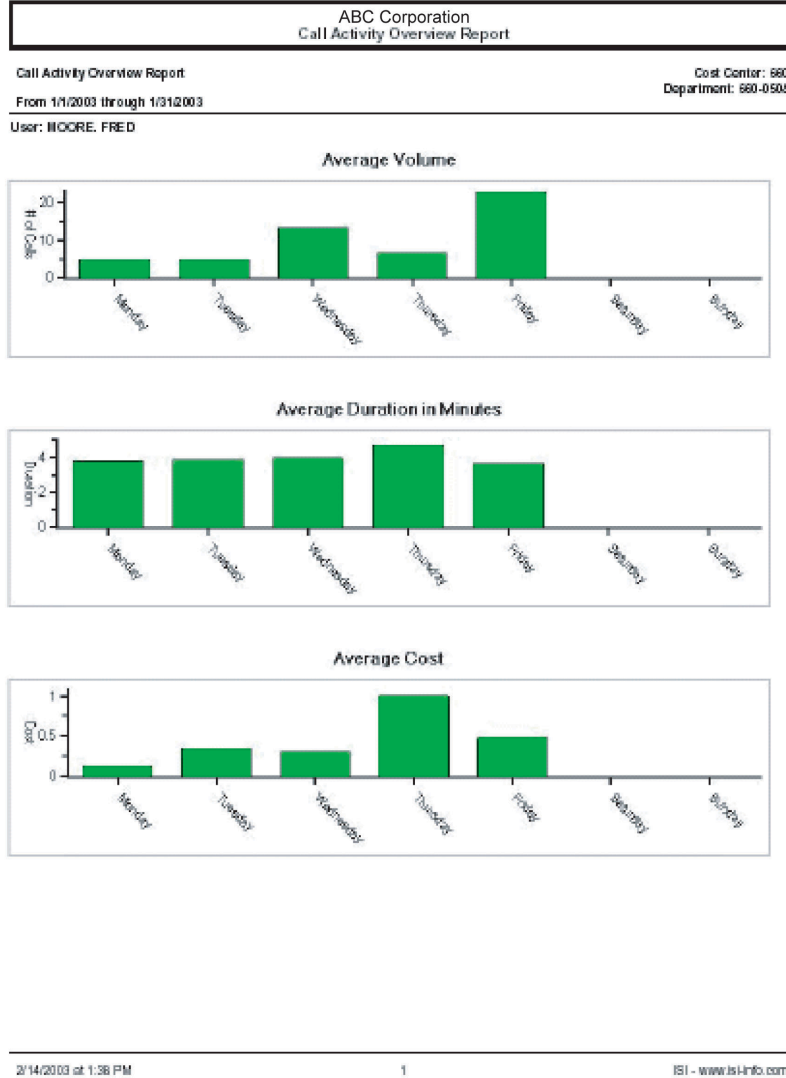
After completing the testing procedure, the debug processes need to be disabled:

```
undebug all
```

### Sample ISI Reports

Figure 5 shows a snapshot of some reports available through the ISI Business Portal.

**Figure 5 Sample Call Activity, Extension Detail, and Executive Summary Reports**



**ABC Corporation**  
**Freq. Dialed Number by Data Source / Extension Report**

Freq. Dialed Number by Data Source / Extension Report From 11/15/2002 through 11/25/2002

| Phone Number                    | Location        | # Calls | Duration      |              | Cost  |         |            |
|---------------------------------|-----------------|---------|---------------|--------------|-------|---------|------------|
|                                 |                 |         | Total (hh:mm) | Avg. (hh:mm) | Total | PerCall | Per Minute |
| <b>Data Source: Philly (3)</b>  |                 |         |               |              |       |         |            |
| 760-9999                        | PHILA, PA       | 5       | 0:56          | 0:12         | 0.19  | 0.04    | 0.00       |
| 852-9999                        | PHILA, PA       | 4       | 0:49          | 0:13         | 0.20  | 0.05    | 0.00       |
| 208-8888                        | LANGHORNE, PA   | 4       | 0:17          | 0:05         | 1.10  | 0.28    | 0.07       |
| 807-0000                        | PHILA, PA       | 4       | 0:35          | 0:09         | 0.20  | 0.05    | 0.01       |
| 870-8888                        | PHILA, PA       | 3       | 0:21          | 0:07         | 0.17  | 0.06    | 0.01       |
| 548-8888                        | PHILA, PA       | 3       | 0:27          | 0:09         | 0.13  | 0.04    | 0.00       |
| 426-4444                        | PHILA, PA       | 3       | 0:57          | 0:19         | 0.09  | 0.03    | 0.00       |
| 656-6666                        | PHILA, PA       | 3       | 0:20          | 0:07         | 0.13  | 0.04    | 0.01       |
| 713-1111                        | PHILA, PA       | 3       | 0:31          | 0:11         | 0.13  | 0.04    | 0.00       |
| 730-1111                        | PHILA, PA       | 3       | 0:35          | 0:12         | 0.13  | 0.04    | 0.00       |
| 990-8888                        | PHILA, PA       | 3       | 0:29          | 0:10         | 0.21  | 0.07    | 0.01       |
| 472-6666                        | PHILA, PA       | 3       | 0:30          | 0:10         | 0.17  | 0.06    | 0.01       |
| 783-6666                        | PHILA, PA       | 3       | 0:30          | 0:10         | 0.17  | 0.06    | 0.01       |
| 658-2222                        | WILLOW GRV, PA  | 3       | 0:18          | 0:06         | 0.48  | 0.16    | 0.03       |
| 882-8888                        | WILLOW GRV, PA  | 3       | 0:20          | 0:07         | 0.68  | 0.23    | 0.04       |
| 990-1111                        | PHILA, PA       | 3       | 0:24          | 0:08         | 0.13  | 0.04    | 0.01       |
| 800-0000                        | PHILA, PA       | 3       | 0:39          | 0:13         | 0.09  | 0.03    | 0.00       |
| 260-5555                        | AMBLER, PA      | 3       | 0:29          | 0:10         | 0.58  | 0.19    | 0.02       |
| 920-1111                        | AMBLER, PA      | 3       | 0:32          | 0:11         | 1.56  | 0.52    | 0.05       |
| 352-3333                        | EDDINGTON, PA   | 3       | 0:14          | 0:05         | 0.58  | 0.19    | 0.04       |
| 443-8888                        | HATBORO, PA     | 3       | 0:21          | 0:07         | 1.31  | 0.44    | 0.06       |
| 775-3333                        | AMBLER, PA      | 3       | 0:13          | 0:05         | 0.43  | 0.14    | 0.03       |
| 385-9999                        | HATBORO, PA     | 3       | 0:26          | 0:09         | 0.83  | 0.28    | 0.03       |
| 975-5555                        | HUNTDGDNVLY, PA | 3       | 0:40          | 0:14         | 1.44  | 0.48    | 0.04       |
| 556-9999                        | INFORMATION     | 3       | 0:33          | 0:11         | 0.00  | 0.00    | 0.00       |
| 362-2222                        | LANSDALE, PA    | 3       | 0:27          | 0:09         | 2.43  | 0.81    | 0.09       |
| 275-1111                        | PHILA, PA       | 3       | 0:47          | 0:16         | 0.13  | 0.04    | 0.00       |
| 242-7777                        | PHILA, PA       | 3       | 0:12          | 0:04         | 0.21  | 0.07    | 0.02       |
| 383-3333                        | PHILA, PA       | 3       | 0:55          | 0:19         | 0.09  | 0.03    | 0.00       |
| 397-5555                        | PHILA, PA       | 3       | 0:37          | 0:13         | 0.13  | 0.04    | 0.00       |
| 440-6666                        | PHILA, PA       | 3       | 0:54          | 0:18         | 0.17  | 0.06    | 0.00       |
| 477-9999                        | PHILA, PA       | 3       | 0:58          | 0:20         | 0.17  | 0.06    | 0.00       |
| 483-2222                        | PHILA, PA       | 3       | 0:33          | 0:11         | 0.13  | 0.04    | 0.00       |
| 513-8888                        | HARLEYSVL, PA   | 3       | 0:27          | 0:09         | 3.75  | 1.25    | 0.14       |
| 975-2222                        | HUNTDGDNVLY, PA | 3       | 0:43          | 0:15         | 1.83  | 0.61    | 0.04       |
| 257-7777                        | PERKASIE, PA    | 3       | 0:29          | 0:10         | 3.90  | 1.30    | 0.14       |
| 718-4444                        | AMBLER, PA      | 3       | 0:19          | 0:07         | 0.96  | 0.32    | 0.05       |
| 298-0000                        | PHILA, PA       | 3       | 0:40          | 0:14         | 0.13  | 0.04    | 0.00       |
| 944-4444                        | NEWTOWN, PA     | 3       | 0:22          | 0:08         | 2.13  | 0.71    | 0.10       |
| 699-0000                        | NORTH WALE, PA  | 3       | 0:18          | 0:06         | 1.53  | 0.51    | 0.09       |
| 254-2222                        | PHILA, PA       | 3       | 0:28          | 0:10         | 0.17  | 0.06    | 0.01       |
| 577-5555                        | PHILA, PA       | 3       | 0:23          | 0:08         | 0.13  | 0.04    | 0.01       |
| 606-2222                        | PHILA, PA       | 3       | 0:19          | 0:07         | 0.13  | 0.04    | 0.01       |
| 278-5555                        | PHILA, PA       | 3       | 0:29          | 0:10         | 0.13  | 0.04    | 0.00       |
| 698-5555                        | PHILA, PA       | 3       | 0:17          | 0:06         | 0.17  | 0.06    | 0.01       |
| 701-8888                        | PHILA, PA       | 3       | 0:23          | 0:08         | 0.21  | 0.07    | 0.01       |
| 717-3333                        | PHILA, PA       | 3       | 0:19          | 0:07         | 0.13  | 0.04    | 0.01       |
| 763-0000                        | PHILA, PA       | 3       | 0:18          | 0:06         | 0.17  | 0.06    | 0.01       |
| 871-2222                        | PHILA, PA       | 3       | 0:19          | 0:07         | 0.09  | 0.03    | 0.00       |
| 977-0000                        | PHILA, PA       | 3       | 1:10          | 0:24         | 0.13  | 0.04    | 0.00       |
| 659-6666                        | WILLOW GRV, PA  | 3       | 0:37          | 0:13         | 0.46  | 0.15    | 0.01       |
| 708-8888                        | PHILA, PA       | 3       | 0:37          | 0:13         | 0.13  | 0.04    | 0.00       |
| 961-3333                        | PHILA, PA       | 3       | 0:31          | 0:11         | 0.21  | 0.07    | 0.01       |
| 884-5555                        | JENKINTOWN, PA  | 3       | 0:23          | 0:08         | 0.58  | 0.19    | 0.03       |
| <b>Data Source: Raleigh (2)</b> |                 |         |               |              |       |         |            |
| 653-1111                        | CARY, NC        | 12      | 1:30          | 0:08         | 1.44  | 0.12    | 0.02       |
| 789-1111                        | RALEIGH, NC     | 12      | 1:59          | 0:10         | 1.44  | 0.12    | 0.01       |
| 320-5555                        | CLAYTON, NC     | 11      | 1:53          | 0:11         | 1.32  | 0.12    | 0.01       |
| 681-1111                        | DURHAM, NC      | 11      | 2:11          | 0:12         | 9.56  | 0.87    | 0.07       |

12/6/2002 at 3:39 PM

1

ISI - www.isi-info.com

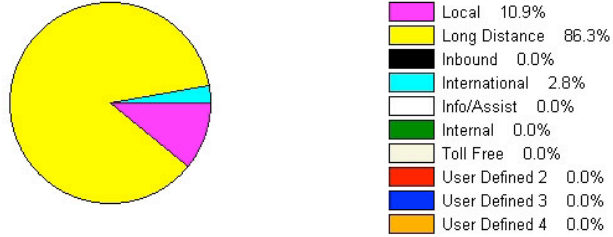
**XYZ Corporation  
Executive Summary**

Executive Summary

Department: Accounting

From 10/1/2005 through 10/31/2005

Call Type Contribution by Cost



Current Month Organizational Summary

| Call Type      | Cost         | Count        | Duration(HH:MM) |
|----------------|--------------|--------------|-----------------|
| Local          | 316          | 876          | 54:30           |
| Long Distance  | 2,503        | 952          | 80:02           |
| Inbound        | 0            | 1,421        | 92:51           |
| International  | 81           | 8            | 0:12            |
| Info/Assist    | 0            | 3            | 0:03            |
| Internal       | 0            | 403          | 6:12            |
| Toll Free      | 0            | 149          | 18:42           |
| User Defined 2 | 0            | 0            | 0:00            |
| User Defined 3 | 0            | 0            | 0:00            |
| User Defined 4 | 0            | 0            | 0:00            |
| <b>Total</b>   | <b>2,900</b> | <b>3,812</b> | <b>252:30</b>   |

Historical Cost by Call Type

| Call Type      | 10/1 - 10/31 | 9/1 - 9/30   | 8/1 - 8/31   | 7/1 - 7/31   | 6/1 - 6/30   | 5/1 - 5/31   | Total         |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Local          | 316          | 327          | 273          | 225          | 255          | 277          | 1,675         |
| Long Distance  | 2,503        | 3,472        | 2,523        | 3,225        | 3,032        | 2,999        | 17,754        |
| Inbound        | 0            | 0            | 0            | 0            | 0            | 0            | 0             |
| International  | 81           | 18           | 8            | 61           | 16           | 245          | 430           |
| Info/Assist    | 0            | 0            | 0            | 0            | 0            | 0            | 0             |
| Internal       | 0            | 0            | 0            | 0            | 0            | 0            | 0             |
| Toll Free      | 0            | 0            | 0            | 0            | 0            | 0            | 0             |
| User Defined 2 | 0            | 0            | 0            | 0            | 0            | 0            | 0             |
| User Defined 3 | 0            | 0            | 0            | 0            | 0            | 0            | 0             |
| User Defined 4 | 0            | 0            | 0            | 0            | 0            | 0            | 0             |
| <b>Total</b>   | <b>2,900</b> | <b>3,818</b> | <b>2,805</b> | <b>3,511</b> | <b>3,303</b> | <b>3,522</b> | <b>19,859</b> |

11/7/2005 at 1:22 PM

1

ISI - www.isi-info.com

## Caveats and Limitations

The following limitations apply when you configure the Cisco Unified Communications 500 Series for the Infortel-ISI Call Reporting Service:

- Domain Name System (DNS) configuration is mandatory. If the Cisco Unified Communications 500 Series is using static IP on its WAN interface, make sure you configure a DNS server using Cisco Configuration Assistant. You can verify the configured DNS server via the Cisco Configuration Assistant dashboard.
- The application supports only one customer for each set of FTP credentials entered.

## Support Information

For more information, visit the SBCS Small Business Support Community at:

<http://www.myciscocommunity.com/community/smallbizsupport>

For Cisco technical support information, please contact the Planning, Design and Implementation help desk at [www.cisco.com/go/pdihelpdesk](http://www.cisco.com/go/pdihelpdesk) (Cisco.com login required) or call 800 GO CISCO and select **PDI**.

For ISI technical support, please contact ISI's Technical Assistance Center between the hours of 7 a.m. and 7 p.m. Central Time at 800 326-6183.