

# *Emerald*

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## **Caller-ID Search Version 1.2**



**Emerald Management Suite  
IEA Software, Inc.**

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## INTRODUCTION

The Emerald CallerID Search application is useful for customer service representatives to assist with automatically locating customers account information based on the telephone number their customers are calling from. Once an incoming call with caller-id information is detected the Caller-ID popup window is displayed in the foreground. The search application sends a request to the URL of the telephone lookup application containing both Caller-ID number and Caller-ID name if available. The results of the request are displayed in the caller popup window.

In the examples and screen shots below the Emerald caller search screen is displayed however the Caller-ID search tool is configurable and can also be used with other third party calling number lookup services.

Additionally if your internal PBX includes client software able to pass caller information to external web sites you may use that software to integrate with Emeralds Caller search URL in lieu of this application.

Care must be taken not to rely on Caller-ID information from the network to exclusively authenticate customers. This information may not always be accurate and it is possible even over the PSTN for individuals to provide false caller information.

## SYSTEM REQUIREMENTS

The Emerald Caller-ID search application requires a Windows XP - Windows 10 or compatible operating system.

## SUPPORTED CALL NOTIFICATION INTERFACES

The following interfaces are available for the Caller-ID search tool to receive call notifications. Please contact [support@iea-software.com](mailto:support@iea-software.com) if you would like to request the Caller-ID search application support additional notification interfaces.

### Asterisk

Caller-ID Search integrates with the asterisk software PBX system using the Asterisk Manager API to monitor incoming calls and display the caller information of all calls ringing through to a configured set of extensions. To integrate the caller-ID search application with asterisk you will need to provide Manager API access with the “Call” permission to all clients using this search application.

Note due to limitations of the Manager API all clients physically receive the data for all call notifications limiting the scalability of this system. If you have more than 32 operators using the Caller-ID search application you may want to look into available Manager API proxy servers. Such as those found here: <http://www.voip-info.org/wiki/view/Asterisk+Manager+Proxy>

When an asterisk server is configured a red lightning bolt icon appears to the left of the “Quit” button while a successful connection cannot be established to the asterisk manager API. When the lightning icon disappears Caller-ID search has successfully connected to asterisk and is monitoring data for calls received.

Security considerations: Manager API logins and manager data are transmitted in the clear over the network. For improved security use IPSec. When assigning manager API accounts only the “Call” privilege needs to be assigned to the manager account.

## YAC

YAC is a software Caller notification system using the windows Telephony API (TAPI) to receive call notifications and optionally broadcast them over the network to up to 10 listeners. YAC can be used to listen for modem requests as well as calls placed through TAPI aware PBX client software.

Emeralds Caller-ID search includes a YAC request listener that upon receipt of a call notification displays the caller information for any calls received. For smaller organizations with few incoming phone lines a single central sever running the YAC software with a modem can be used to broadcast call notifications to all Emerald Caller-ID search clients.

The YAC software and additional information is available here:

<http://sunflowerhead.com/software/yac/>

There are several third party YAC compatible call senders and call listeners available. The simplicity of the YAC protocol can be leveraged to enable integration with existing PBX hardware.

Security considerations: The YAC listener in the Caller-ID search application provides no authentication and accepts any call request sent to it from any computer on the network.

## Modem

When enabled the Caller-ID search application listens for Caller-ID data sent with a modem RING indication on the selected com port. The modem initialization string and search keys to determine the portion of the ring data containing caller information are configurable. You may need to consult your modems documentation for the proper initialization string and Caller-ID keys for your modem.

When a modem COM port is selected the Dial option is available allowing you to use your computers modem as a phone dialer. To stop the Caller-ID search application from using the modem to allow another application such as fax printing to access the modem click the “Disable Monitor” button in the Caller-ID search window.

## SETTINGS – CONFIGURING CALLERID SEARCH

The settings menu provides for the configuration of Caller notification and connectivity to a search service to display the results of the caller lookup.

Options - CallerID Search v1.2.17



Asterisk Call Notification

Asterisk Manager  Asterisk Server

Password  API Port

Extensions (Comma Separated)

YACC Call Notification

YACC Port

Modem Call Notification & Dialer Settings

Modem Settings  Com Port

CallerID Init String

CallerID Key  Name Key

Browser CallerID Search Options

Search URL

Search Format: \* - Caller ID, + - Caller Name (ex. http://myserver/search.htm?phone=%&name=+)

Startup URL

Browser Target

Web Link

OK Cancel

Field	Source	Description
Asterisk Manager	Asterisk	API manager name. The manager must have read access to “call”
Password	Asterisk	API manager password. The manager must have read access to “call”
Asterisk Server	Asterisk	The IP address of the asterisk server or Asterisk API proxy.
API Port	Asterisk	TCP port of Asterisk API
Extensions	Asterisk	Comma separated list of phones to listen for ring. For example a SIP phone registered as “104” would be entered as SIP/104.
YACC Port	YACC	YACC TCP call notification listen port
Modem Settings	Modem	Modem port settings in the form Baud Rate,Parity (Y,N), Character Length, Stop Bits. For example 115200,N,8,1
Com Port	Modem	Com port of modem to listen for rings with Caller-ID information.
CallerID Init String	Modem	Modem initialization string to send Caller-ID information with telephone ring message from modem.
CallerID Key	Modem	Text to search on to assign caller id number. For example NMBR =
Name Key	Modem	Text to search on to assign caller id name if available. For example NAME =
Search URL	Common	URL string of telephone search server. See “Search Format” information in the settings dialogue for more information on configuring the search URL to pass calling phone and name. Emerald 5 users should enter the following search string: https://myemeraldserver.com/callerid.ews?phone=%&name=+ Where myemeraldserver.com is the network address of the Emerald web server.
Startup URL	Common	URL string of telephone search server to connect on startup. Emerald users should enter URL of the Emerald web server and logon to Emerald via login form displayed in browser window when starting callerid popup.
Browser Target	Common	The hyperlink target of the CallerID popup window
Web Link	Common	When “Pop-up” the Search URL above is rendered in the CallerID

		Search window and shown in the foreground. Otherwise the call information is sent to the target browser window that may already be open in the background.
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## CALLER-ID SEARCH HOT-KEYS

Efficient navigation of the Emerald Caller-ID search application ensures the fast access to caller information when needed. We highly recommend assigning the windows shortcut for the Caller-ID application a shortcut navigation key such as Ctrl-Alt-K so that the Caller-ID application can be quickly loaded or brought into the foreground as necessary while using any windows application.



Shortcut	Action
Alt-Q	Disconnects from any notification servers and closes the Caller-ID search application
Alt-D	When a modem comport is configured this allows you to use your computer as a phone dialer
Alt-H	Hides the Caller-ID search menu by minimizing it. The window will automatically be opened in the foreground when the next incoming call is received. To manually bring the caller-ID window to the foreground use a desktop shortcut key you have previously assigned to the shortcut which launches this application such as CTRL-ALT-K
Alt-M	Temporarily disables receipt of additional call notifications (Disable Monitor) and closes blocked resources such as modem com ports.
ALT-E	When the monitor is disabled this shortcut key re-enables the monitor.
ALT-S	Opens Caller-ID search configuration options

## EMERALD CALLER SEARCH RESULTS

When the Emerald Caller-ID URL ([https://myemeraldserver.com/callerid.ews?phone=\\*&name=+](https://myemeraldserver.com/callerid.ews?phone=*&name=)) is used for calling number lookup a screen similar to the one shown here is displayed when there's a match of the called number to one or more Emerald accounts. To display the MBR of one of the records found click Customer ID: field in the results display. When this is done MBR is opened in a separate browser window and current search results are dimmed in the display. If the MBR information is not shown when the Customer ID field is clicked the browser window for the MBR information may already be opened in another browser window.

When there are no matches to existing Emerald accounts found the calling number, calling name and any available location data is displayed.





