

BladeWare Fax-to-Email Server



BladeWare Fax-to-Email (F2E) is a BladeWare application that directly receives incoming SIP-based calls. It extracts the called number for the inbound call and uses it to query a subscriber database to retrieve fax and email options. If the database lookup succeeds, the fax operation is completed and the result emailed to the specified email address using a built-in SMTP server. Fax2Email also maintains call detail, SNMP, and Web-based management interfaces.

BladeWare is Commetrex®' host-media-processing telephony middleware, a value-adding platform licensed to telecom-equipment OEMs and system developers to enable IP-based network and enterprise voice and fax services. Fax2Email is a client application that uses BladeWare's Open Telecommunications Framework® (OTF) Kernel API to accept SIP calls and to receive faxes in real time using Multi-Modal Terminating Fax (MMTF). MMTF terminates both T.38 fax relay and G.711 pass-through fax.

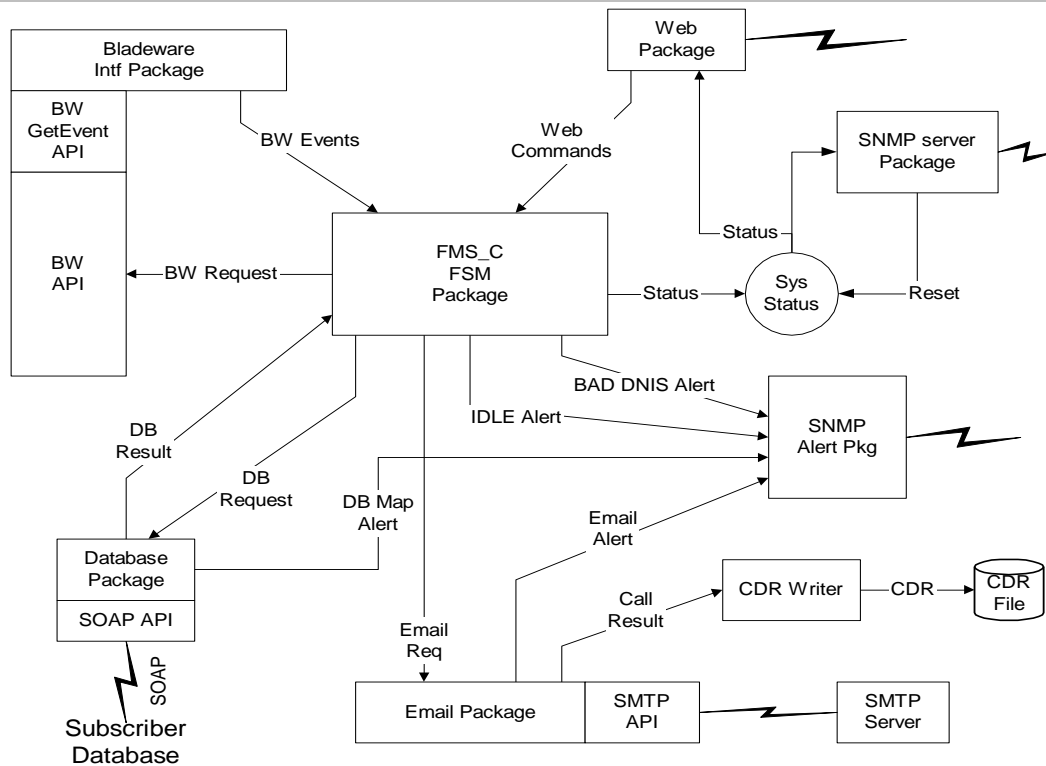
BladeWare Fax2Email source code is supplied as an optional fax-media-server application with the BladeWare F2E SDK. This means the licensee can modify the application to, for example, change the SNMP MIB, call-detail records (CDR), or subscriber database lookup. Although source code is available to support modification, the license does not include any per-port runtime licenses, which are licensed separately.

Features

- TerminatingT38 and G.711 pass-through
- 200-ports per server
- Subscriber database lookup
- SMTP support
- SNMP Support
- Call Detail Records (CDR)
- Host media processing
- Linux based
- No specialized hardware required
- SIP call control
- Extensible client-server architecture
- Web-based administration
- Low power utilization
- Small footprint
- Archiving feature

Benefits

- Service differentiation with fax functionality
- Interoperate with all gateways
- Lowest cost per port
- Ease of provisioning
- Control of product platform
- Low operating cost
- Developer control of system



System Overview

BladeWare is an open value-adding platform that allows the licensee to cost-effectively develop FoIP-based network-service applications. BladeWare is a distributed client-server system. Its distributed architecture makes it extensible; its client-server architecture makes it scalable simply by adding server blades.

Subscriber Database

The subscriber database look-up package interfaces with the subscriber database via a SOAP library. But in its simplest form, the database is a local flat file. The necessary information (subscriber email address and preferred image-file format) can also be extracted from the P-asserted identity fields in the SIP header. And the Microsoft proprietary SIP headers that identify the recipient in Exchange applications are also supported. But the developer can easily substitute other access methods.

Email Package

The Email package forms emails and sends them to the specified SMTP server. The package includes a template-processing facility

for formatting the emails. A single thread is used to send emails. A queue is maintained within the package of pending operations. If the email is successfully sent, the fax file is deleted. If the email fails, the fax file and a text version of the email are written to a specified directory. In either case, a call-detail record (CDR) is written. The queue is maintained in memory; however a copy of each entry is saved in a specified directory. At startup, the email package will reload all queue entries from the queue file and process them. This scheme allows recovery after system failure. The queue is checkpointed to disk after each modification.

Call-Detail Records

The CDR package writes the call-detail record for each completed call. It handles swapping and deleting out-of-date CDR files.

SNMP

The SNMP Agent runs a thread that answers SNMP requests with the use of an SNMP library. It implements the Management Information Base (MIB) defined by Commetrex for the F2E system. A separate thread runs a trap package that provides an API for sending alerts.

Archiving

BladeWare F2E includes the ability to send a copy of every selected received fax to a second email address, optionally using an alternate server, for the purposes of document archiving. The optional email will contain the CDR information for that particular call as well as the document itself as an attachment. Normally, F2E sends received faxes to a recipient's email address. The archiving feature adds the ability to modify this behavior by optionally disabling either the original direct email or the archive copy so that either or both can be sent.

Three optional configuration parameters control the operation. These parameters specify both the email address to which the mail is sent, email server through which this mail is sent, and the email behavior of the system. They are ARCHIVE_MAIL_ADDRESS, ARCHIVE_MAIL_SERVER, and SMTP_BEHAVIOR, respectively.

Web-Based Status Monitoring

The Web server provides a Web-based status-monitoring facility. It provides channel status, and queue sizes. It provides commands to start, stop and suspend the operations of the Email2Fax package.