

# Collaboration

## Technology Components

Protocols are the methods of communication that enable components to speak to one another. It is imperative that care is taken to ensure that the protocols selected for the state are compatible with one another.

An email server is the application server providing a set of services to multiple clients. Depending on the functional requirements, the server may perform some combination of the following services: distribute files, temporarily hold new messages, or store messages that have already been read. The server may be located on the desktop PC or on a combination of servers distributed over a local area network (LAN). Two major components reside on the server:

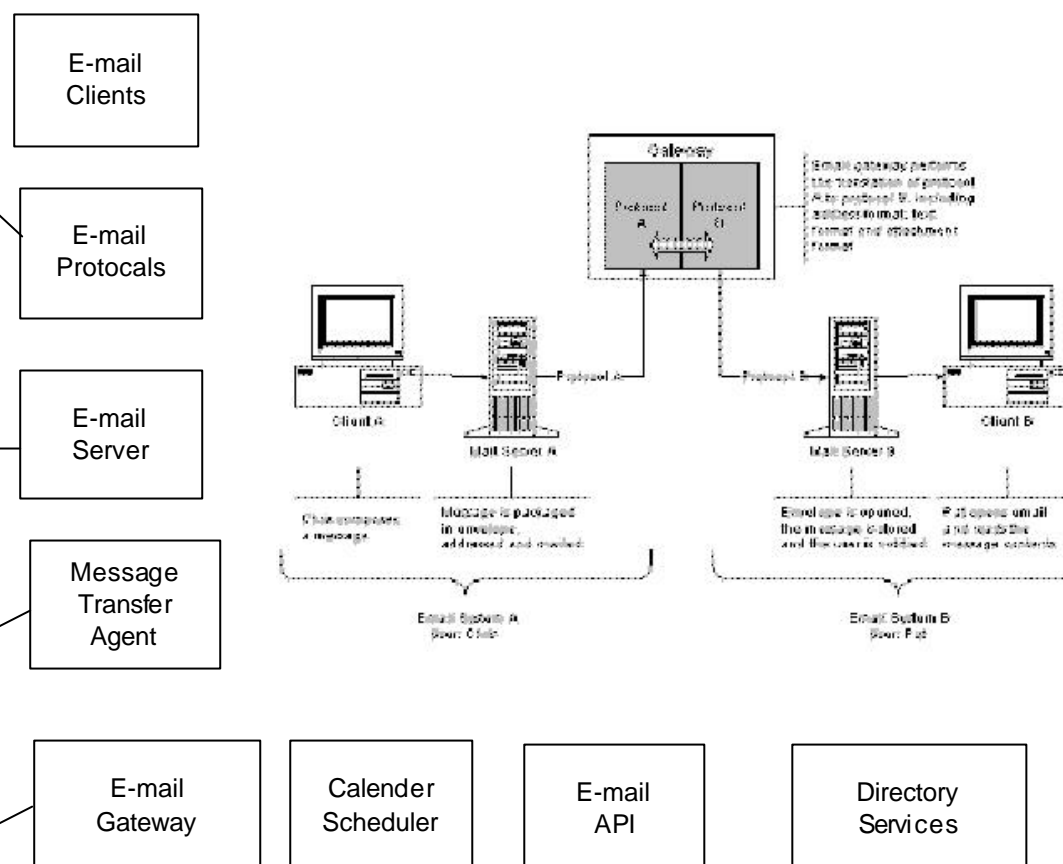
**Message store.** A database used to file and manage messages. Depending on the functional needs, the message store may allow the messages to be opened, read, deleted, browsed, and searched.

**Directory user agent (DUA).** A program that retrieves information from directory services, such as email addresses and distribution lists. In the case of email, the DUA is responsible for locating, verifying, and retrieving email address from local and network directory services.

A message transfer agent (MTA) is an email delivery program. Acting like a traditional postal worker, the MTA accepts a message from either a MUA or another MTA. The message is stored locally while the MTA determines the message's destination and delivery method. Depending upon the message's final destination, the MTA delivers the message to either the addressed mailbox or routes the message to another MTA.

Email gateways are responsible for transferring messages between incompatible email systems. In addition, gateways are used to handle routing to particular services outside of an email system. Like in most language translations, the translations are not always perfect, creating the potential for data loss, therefore it is important to minimize the number of gateways required for an email system.

Calendaring and scheduling (C&S) is the process of scheduling events and accessing calendar information for people, facilities, and equipment. A calendaring and scheduling application manages the calendars and schedules of individuals, groups, facilities, and equipment. Through C&S, events and activities can be easily coordinated through the electronic exchange of scheduling information between individuals and groups.



An email application programming interface (API) enables programs to access various components of an email system (i.e., email transport services, email directories, and message stores). An email API is a series of sub-routines that connect a sender's application to a recipient's email application.

## Standards

**Standard 1: Use Simple Mail Transport Protocol (SMTP).**

**Rationale**  
 - Simple Mail Transport Protocol (SMTP) is the standard transport protocol for sending messages from one MTA to another MTA over the Internet. Using MIME encoding, it enables the transfer of text, video, multimedia, images, and audio attachments. It is the predominate transfer protocol utilized by web browser-based email user agents.

**Standard 2: Use Multi-purpose Internet Mail Extensions (MIME).**

**Rationale**  
 - Multi-purpose Internet Mail Extensions (MIME), a SMTP message structure, is the standard specification for the attachment of audio, video, image, application programs, and ASCII text messages. The content type is stored in the message header as mail extensions. When the message is delivered, the player or application specific to the content type is opened so that the attachment can be viewed in its native format. If the player or application is not included with the browser, then the user must load it. Common image and video players are included with most browsers.

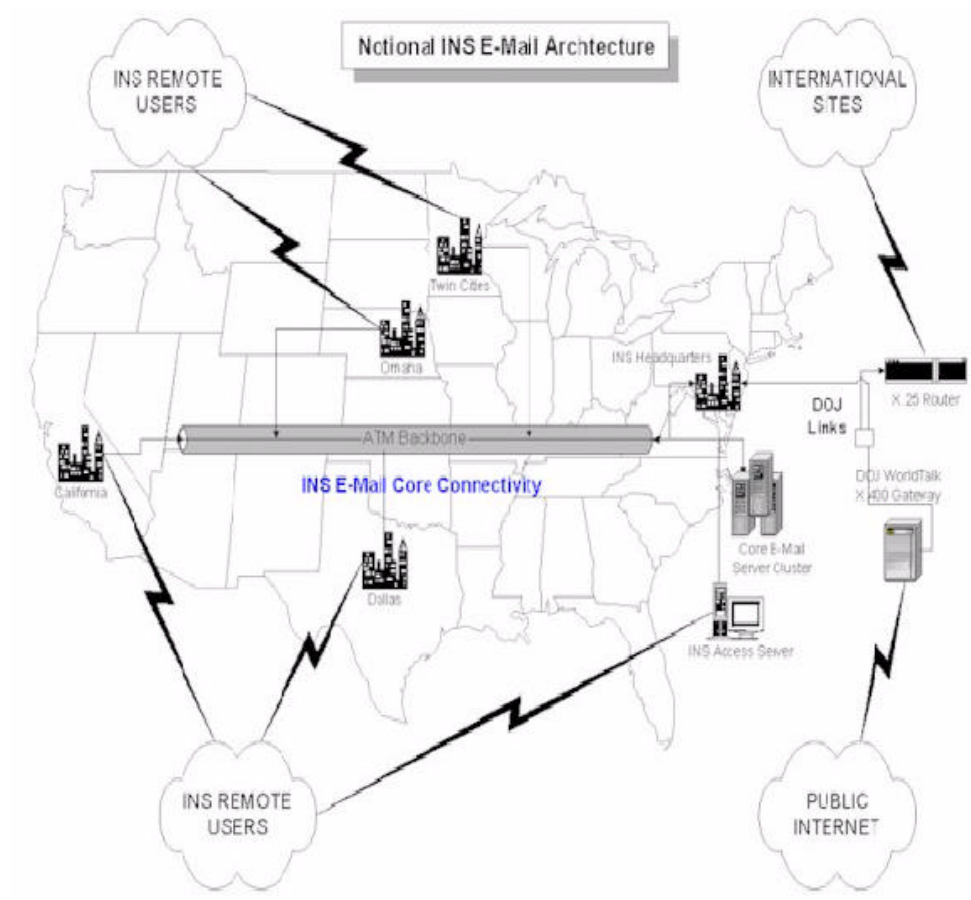
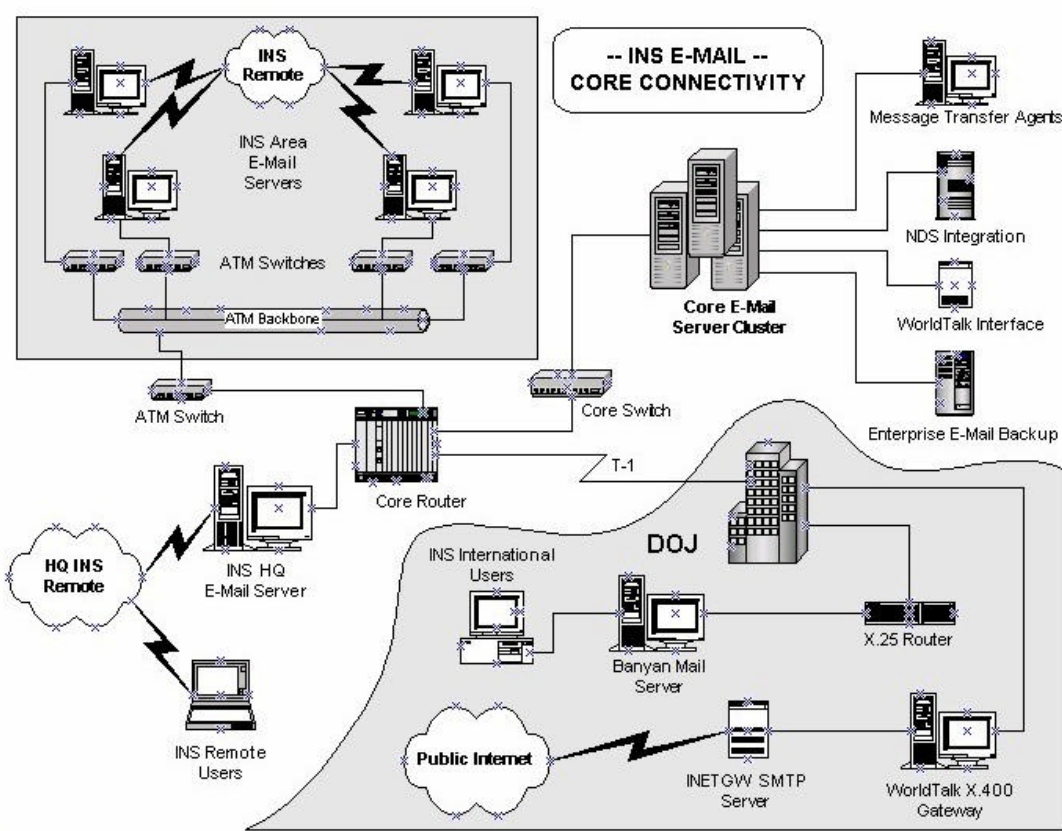
**Standard 3: Use Internet Message Access Protocol version 4 (IMAP4).**

**Rationale**  
 - Internet Message Access Protocol version 4 (IMAP4) is the standard protocol for access to the mail server. The user has the option of storing and manipulating messages on the mail server, which is important for job functions that require the user to access email from several different clients. IMAP is also ideal for situations where the user has a low speed link to the mail server. Instead of downloading all messages to the client, IMAP allows the user to select which specific messages to download. If a message has several MIME attachments, the user can specify that only the text portion of the message is to be downloaded for viewing. This practice is considerably more efficient in the event that a high-speed link is not readily available.

**Standard 4: Select an email server system that allows multiple standards-based email clients.**

**Rationale**  
 - When an email server uses IMAP4 standard, any IMAP4-based client can access that server.

## Enterprise Architecture



Product	Products				
	Existing or Proposed	Obsolete	Transitional	Strategic	Research
<b>Basic Collaboration: E-Mail: Calendar Sharing/Scheduling, Network-based Fax</b>					
Banyan Intelligent Messaging & Beyond Mail	✓				
CC:Mail	✓				
Exchange 2000				Pilot	
Exchange - old versions		✓			
Groupwise - all versions		✓			
Lotus Notes - Mail & Calendar		✓			
MS Mail		✓			
Outlook 2000				Pilot	
Outlook - old versions		✓			
Outlook Express		✓			
State e-mail Web Interface		✓			
TAO		✓			
<b>Extended Collaboration</b>					
CaLAndar	✓				
Exchange 2000				Pilot	
Exchange - older versions		✓			
GroupWise - all versions		✓			
Lotus Notes - Workgroup		✓			
FileNET Panagon Integrated Document Management (IDM) - for document management				✓	
FileNET Panagon IDM and Capture Desktop - for low volume imaging (under 10,000 pages/day)				✓	
FileNET Panagon IDM Image Services - for high volume imaging				✓	
<b>Process Management</b>					
Exchange 2000					✓
FileNET Workflow				✓	
GroupWise - all versions		✓			
Lotus Notes - Workflow applications		✓			
<b>Directory Services</b>					

Enterprise Service Architecture	Technology Architecture			
	Collaboration System			
	SIDE	FSCM ND	DWGN0	REV
	John Wu		SFEE	QF 13