The Domino effect

FROM PROPRIETARY DATABASE TO OPEN STANDARDS: EVERYTHING YOU EXPECT FROM LOTUS NOTES IS HERE. THERE'S WEB FUNCTIONALITY, TOO. TERENCE GREEN CHECKS THE LATEST BETA.

Lotus Domino Release 5.0 was announced for February delivery, a couple of months later than expected, but judging by the final preview version, it's well worth the wait. At the time of writing Lotus had only announced a suggested US price for the standard Domino package called the Lotus Domino Application Server Release 5, or R5 for short. Mail Server and Enterprise Server packages will also be offered.

The basic components of R5 are the web- and Java-enabled Domino Notes database server and the Domino Designer, which can be used to create collaborative or groupware applications which work with web browsers like Internet Explorer and Netscape Navigator. Also available is a Notes client which integrates Notes groupware and workflow services as well as standards-based web browsing and authoring, newsgroups and email.

Domino R5 completes a fairly rapid transition for Notes from proprietary database development environment to open standards platform. It now delivers Notes services as Java components, enabling third-party tools to be used for building applications and allowing existing Notes applications to be dished up for web browsers without re-coding. Although the Domino server is required as the backbone for the Notes groupware and workflow services, Lotus actively supports third-party developer tools. There is support for Java and Java development tools from vendors like Borland and Symantec, web design tools from NetObjects Fusion and Microsoft FrontPage, and either the Domino HTTP server or Microsoft's Internet Information Server can be used for web serving. Support for other web servers is promised later in 1999, as is a Linux version.

Domino R5 is big on Java. IBM's WebSphere Applications Server bundled with Domino

Illustration by Joe Presedo

Application Server provides support for Java servlets, Java Server Pages, the Common Object Request Broker Architecture (CORBA) and the Internet Inter-ORB Protocol (IIOP).

In April, Lotus will ship the latest version of eSuite, a suite of Java productivity applets which can be used by developers to add basic word processing, spreadsheet, graphics and presentation functionality to Domino applications. Connectivity for back-end and legacy systems is available via an enterprise integration toolset for connecting Domino to databases (DB2, Oracle, Sybase), transaction systems such as CICS and Tuxedo, and applications such as SAP/3.

On the client side, the big change is that Notes R5 now operates as a standards-based mail client with newsgroups in addition to the familiar document management, searching, workflow, scheduling and calendering and business applications. Browsing with Internet Explorer is built into the R5 client, but you can opt instead for browsed pages to open in an external Internet Explorer or Netscape Navigator browser. All the services in the new client have been incorporated using standard net protocols, allowing the client to be used for regular email (POP3 and IMAP support), web-based email (HTML 4.0 and MIME), directory searches (LDAP) and newsgroups (NNTP). Security is provided through SSL and S/MIME plus support for X.509 digital certificates. When Notes clients are used at both ends of the communication, Notes supports encrypted mail, too.

The client has a new standalone mode similar to a regular email client in which it doesn't need to have access to a Domino server. This is not the same, though, as the disconnected mode in which the client maintains local replicas of server data allowing offline use for mobile users. It's easy to switch between standalone, connected and disconnected mode. In the latter mode, users can work as if connected. Editing, searching newsgroups, and sending mail and data is synchronised when the client next reconnects to the LAN.

Mobile clients now include handheld devices such as PalmPilots. Windows CE is also supported via many vertical market third-party solutions and a generic replication solution, Cadenza, from UK developer CommonTime. The R5 client also allows administrators to have more control over the client desktops. Most features of the client can be controlled centrally, via modifications to the public directory. This centralised approach also means that roaming users can automatically pick up their desktop settings wherever they log in, via a R5 client.
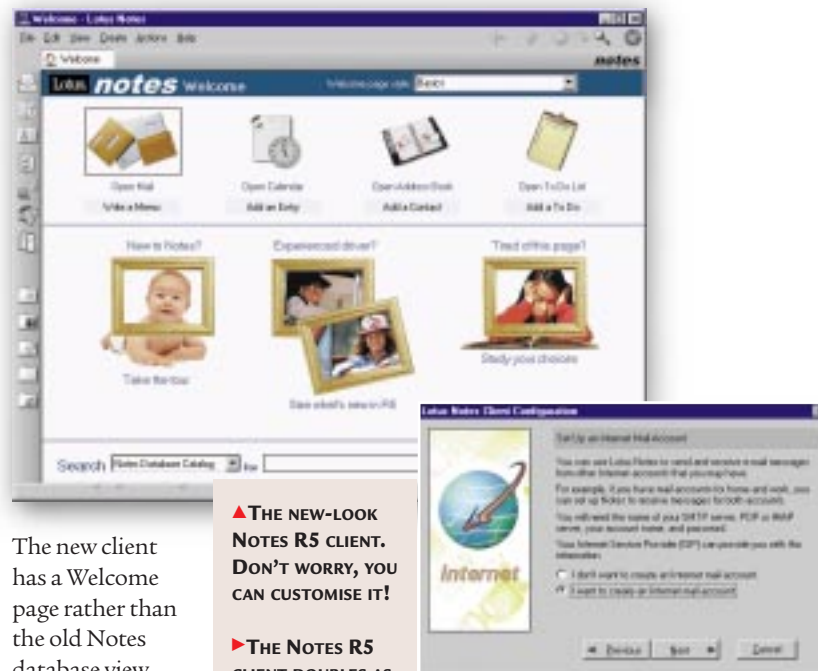

▲ THE NEW-LOOK NOTES R5 CLIENT. DON'T WORRY, YOU CAN CUSTOMISE IT!

▶ THE NOTES R5 CLIENT DOUBLES AS A REGULAR EMAIL CLIENT FOR ISP DIAL-UP ACCOUNTS

The new client has a Welcome page rather than the old Notes database view, but that is still available as a user option. It also has a new bookmark feature down the left-hand side. Bookmarks are hotlinks to any data or application such as Notes applications or web pages. A company can create its own customised opening page with automatic news and information updates.

Domino runs on Windows NT 4.0 (Alpha and Intel), AIX, HP/UX, Solaris (SPARC and Intel), OS/2 Warp Server 4, AS/400 and the IBM S/390. At the bottom end, Lotus has invested a lot of effort in improving performance on NT 4.0 and that version now supports high-availability clustering, failover, and load balancing. Lotus claims that the added performance allows more users to be hosted per server. We weren't able to test the shipping version in time for publication, but the beta 2 version displayed an excessive fondness for lots of memory. It could be a beta issue, but is just as likely to be down to the embedded Java Virtual Machine.

Network administrators who have to roll out Domino will find that the new task-orientated
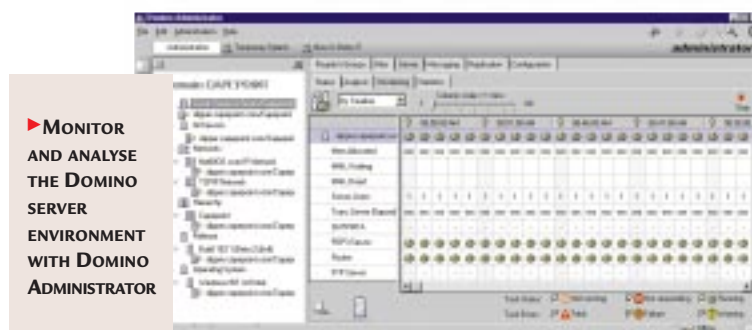
▶ MONITOR AND ANALYSE THE DOMINO SERVER ENVIRONMENT WITH DOMINO ADMINISTRATOR

Domino Administrator provides a lot of help for monitoring and managing Domino servers. It has a more intuitive layout of administration tasks and lots of system monitoring options, including a graphical topology map. Fixing performance bottlenecks by reorganising database locations and replication can now be achieved through a drag-and-drop interface. Move a database from one server to another and R5 will automatically update mail links and replication services. There are timesaving features for handling users, too: multiple users can be managed collectively; management choices can be applied by means of setup profiles from the administrator instead of at the client desktop; and profiles can be applied automatically so that new users get the services you want to make available to them when they log in.

All these functions are in one place at last, under a single administration interface with a tree of servers on the left and the services for each listed on the right.

Systems management has further been addressed through new programming hooks for third-party tools. Not surprisingly, Tivoli, another IBM company, is one of the first to have management services available for Domino R5. But the new management interfaces have also been used to integrate mail migration tools licensed from Binary Tree. Other products will follow, as Lotus has an army of 20,000 business partners developing Notes applications and add-on tools. The Binary Tree tools support mail and directory migration from Microsoft, Netscape, and Novell mail systems and from Qualcomm Eudora into Domino R5.

Upgrading to Domino R5 from the previous release is supported through backwards compatibility with R4 databases and the directory, allowing for a phased migration. R4 applications work on R5, but R4 clients won't be able to access new R5 services. The Notes 5 client is similarly backwards compatible and can be made to look like the R4 client. □
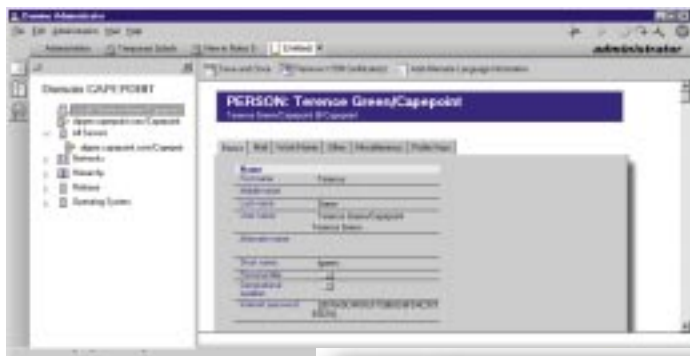
▲ ALL ADMINISTRATION IS NOW UNDER THE SAME ROOF WITH THE NEW ADMINISTRATOR INTERFACE

▶ DOMINO DESIGNER R5 IS THE CENTRAL RESOURCE FOR APPLICATION DESIGN

New features of note in Release 5

The Notes client no longer requires that the user employs it within a Lotus Domino-based environment.
☛ It is designed to work with a wide range of other server environments. This gives the user greater freedom to do such things as retrieving ISP-hosted mail through a variety of protocols including POP3.
☛ Support for native MIME, the standard message format for internet mail, is now included.
☛ Support for LDAP (Lightweight Directory Access Protocol). This protocol allows users to locate people, devices or files across a network, whether intranet or internet. Among other things, this will allow the use of an LDAP server for local address books.

Lotus also aims to make Notes the easiest-to-use integrated internet client, and to this end there are several improvements.
☛ A navigation bar with forward, back, stop and refresh buttons, which is always accessible in the upper right-hand corner. These buttons, which provide an intuitive way of working, will allow users the ability to easily navigate through information in Notes, just as they would when using any popular web browser.
☛ Bookmark options have been improved. As well as having links to web pages, as you might expect, users can set up their own bookmarks for documents, views and more. It is also possible for a user to import Microsoft Internet Explorer favourites and Netscape Navigator bookmarks for use within Notes.

Previous releases of Notes have always been good on the email side of things and Release 5 builds on this with extra facilities.

☛ New mail preferences combined with calendar preferences now mean that it's possible to pre-set preferences for every message sent, so, for example, you could set all messages to be high priority.

As well as these major upgrades, the new Release 5 will contain other features too numerous to list here. These include better support for mobile users and the ability to use Notes for connecting to your Information Service Provider, and synchronise information with your PDA, too.

DAVID LUDLOW