



GT.M Update

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Overview

- Business
- Releases



FIS Profile – Bandhan



The screenshot shows a web browser window with the URL www.fisglobal.com/C031314. The page features the FIS logo and a navigation menu with links for Products, Services, Solutions, About Us, Contact Us, Login, and Global Sites. A search bar is located in the top right corner. The main content area displays a news article titled "Bandhan, India's Largest Microfinance Institution, Accelerates Financial Inclusion with FIS". The article includes a "Key Facts" section with four bullet points and a paragraph dated "JACKSONVILLE, Fla., and KOLKATA, 09 Oct. 2014". A left sidebar contains a list of menu items, with "MEDIA ROOM" highlighted in green. The bottom of the page shows a scroll bar and the text "OUR COMPANY".

Bandhan, India's Largest Microfinance Institution, Accelerates Financial Inclusion with FIS

Home • About FIS • Media Room • News Releases

Key Facts

- Bandhan, one of India's newest proposed banks, has outsourced all technology operations for its new banking operation to FIS.
- Bandhan Financial Services Pvt. Ltd. is the largest microfinance institution in India and one of only two recipients of the "in-principle" approval recently granted by the Reserve Bank of India (RBI) to set up a bank.
- The proposed Bandhan bank plans to commence operations in early 2015 with about 600 branches and 10 million customers.
- FIS has been chosen for its proven capabilities and comprehensive, in-country servicing of India's financial institutions.

JACKSONVILLE, Fla., and KOLKATA, 09 Oct. 2014 – FIS™ (NYSE: FIS), the world's largest provider of banking and payments technology solutions and a global leader in consulting and outsourcing solutions, today announced it has been selected as the strategic technology partner for India's largest microfinance institution, Bandhan, which is one of only two entities granted "in-principle" approval by India's banking regulator to set up a universal bank.

AWARDS AND RECOGNITION

CAREERS

COMMUNITY INVOLVEMENT

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FIS INMOTION

INVESTORS

MEDIA ROOM

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OUR COMPANY

EHS – Hakeem rollout



The screenshot shows a web browser window with the following elements:

- Browser Tab:** EHS holds a press conference
- Address Bar:** ehs.com.jo/en/content/ehs-holds-press-conference-discuss-future-plans-2015
- Logo:** EHS Electronic Health Solutions
- Navigation Menu:** Electronic Health Solutions, Hakeem Program, Electronic Library of Medicine
- Header Image:** A doctor in a white coat standing in a modern medical office with multiple computer monitors.
- Text:**

An Innovative Technology Driven Company.

EHS holds a press conference to discuss future plans of 2015

Thursday, March 26, 2015

Amman - Electronic Health Solutions (EHS) has revealed that Hakeem program will automate 97 health institutes throughout Jordan by the end of year 2015, as declared by EHS's chairman Dr. Rami Farraj. Dr. Farraj stated in a press conference, which took place on March 26, 2015, that EHS is managing 4 main initiatives that utilize technology to reinforce the quality of health care services in the public sector. The initiatives include: Hakeem program, Electronic Library of Medicine "ELM", Hakeem Academy and the Jordanian Medical and Health Informatics Initiative that is currently under development.

CEO Eng. Rami Adwan stated during the conference: Hakeem program commenced its automation process since
- Thumbnail Image:** A small inset image showing a man in a suit (likely Dr. Rami Farraj) speaking at a conference.

EHS – Electronic Library of Medicine



The screenshot shows a web browser window with the URL www.elm.jo. The page header features the logo for "Electronic Library of Medicine - Jordan" in Arabic (علم) and English. Below the logo, it says "مكتبة الأردن الطبية الإلكترونية". To the right, there are social media icons for Facebook and Twitter, and a language selector for "العربية". A "Menu" button is located in the top right corner of the main content area.

The main content area is a sign-in form with the following elements:

- Username input field
- Password input field
- Sign in button
- [Forgot Password ?](#) link
- [Register for FREE](#) button

The background of the sign-in form is a photograph of a doctor in a white coat using a tablet in a hospital setting. Overlaid on this image is the text: "ACCESS TO evidence-based medical information anywhere in JORDAN".

Releases – V6.2-001



- Auto-relink now production grade
- Triggers can be used on global variables that span regions
- TLS support for SOCKET devices
- MUIP LOAD automatically detects file format
- JOB parameter to pass local variable context
- VIEW "POOLLIMIT" to restrict “batch” processes to subset of global buffers to limit impact of interactive / online processes
- and more...

Releases – V6.2-002



- Performance
 - Epoch tapers
 - \$ORDER(gvn,-1)
 - Improve efficiency under high contention conditions
 - Code size reduction that also improves performance
- Enhancements
 - \$ZUT & \$ZHOROLOG intrinsic special variables
 - More TLS functionality
 - \$gtm_autorelink_ctlmax
- VIEW "POOLLIMIT" considered production grade
- and more...

Auto-relink



- Processes can “subscribe” to updates to automatically link & execute latest published versions of routines in directories
 - e.g., `myApp/o*(myApp/r)`
 - Relink recursive to relink routines already on execution stack
- Other process can “publish” updates
 - Explicitly, e.g., `ZRUPDATE "myApp/o/XYZ*.m"`
 - Implicitly, by linking from directory to which it has subscribed
- Notes
 - 64-bit only – 32-bit accepts * suffix for code compatibility
 - Auto-relinked object code is shared by all processes
 - Use hugepages to map shared memory segments
 - Please use it!
 - Enabled by default in `gtmprofile/gtm` scripting

Encrypted file, PIPE, FIFO IO



- Plugin architecture – GT.M has no cryptographic software
 - Encryption plugin API significantly enhanced
 - Customized plugins must be reworked
- Protect data at rest other than in databases
- Keys identified in files section of configuration file pointed to by \$gtmencrypt_config
- KEY / IKEY / OKEY & IV device parameters
 - Initialization vector (IV) exactly 16-bytes
 - SEEK not supported for encrypted files

Pass sockets between processes



- Functionality for a client and a server to add additional TCP connections, e.g.,
 - Client & server have initial / existing connection, decide to add another
 - Server creates identifier (e.g., pid, or random number associated with pid in database) & shares with client
 - Client initiates new connection, e.g., through xinetd, to start intermediate process which communicates with client and receives identifier of server process
 - Intermediate process passes connection to server process
- With websockets and HTML5, good for creating rich user interfaces

It's about time



- `$ZUT` – microseconds since Jan 1, 1970 00:00:00 UTC
 - Timestamps comparable across systems and time zones
- `$ZHOROLOG`
 - First two pieces are identical to `$HOROLOG`
 - `$PIECE($ZHOROLOG,"",...)` same as `$PIECE($HOROLOG,"",...)`
 - Third piece is microseconds within current second
 - Fourth piece is offset of current timezone from UTC



Thank You

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