



IBM Vault Registry for online banking

Highlights

Reduce overall costs and complexity with an integrated registration and certification solution

Provide scalability and flexibility for growth and changing business needs of banks

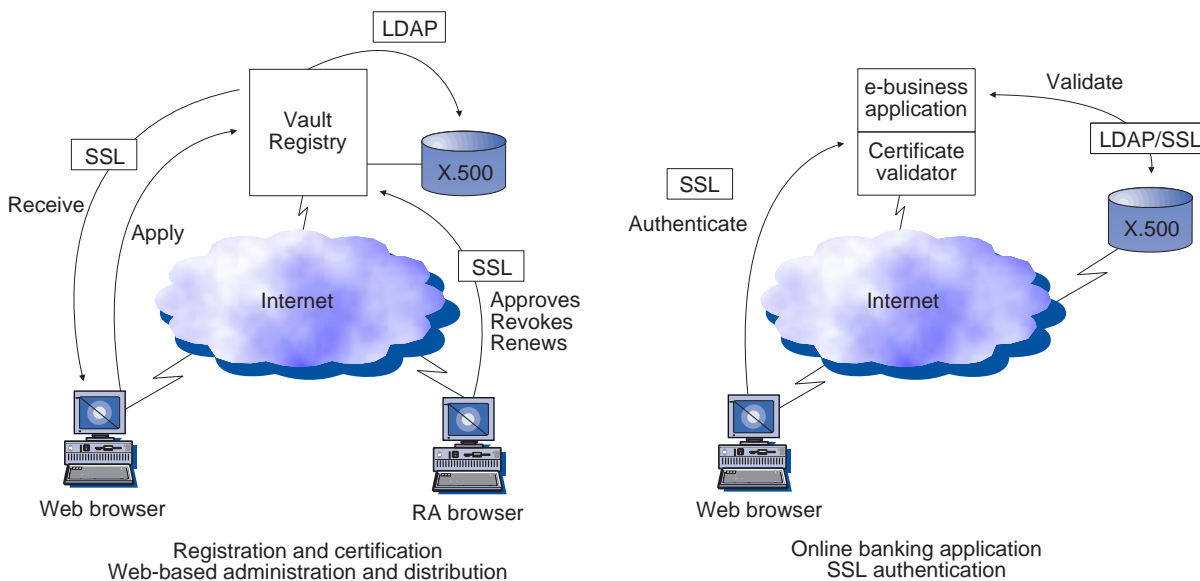
Customize the registration process for unique banking policies for new and existing systems and applications

Enable higher levels of authentication, data privacy, data integrity and access control while reducing the risk of nonrepudiation

Capitalize on the future of banking

Customer demand for online services is becoming as substantial in the banking industry as the automated teller machine (ATM). Increasingly, bank customers want access to account statements, loan applications, balance transfers and bill paying using a secure Web site. The advantages of online banking include:

- Building trust and increasing customer satisfaction
- Improving customer service
- Reaching new markets
- Reducing costs and improving efficiency



IBM Vault Registry registration process

Offer bank customers a security-rich environment that they can trust.

By creating an online banking application with existing hardware, software and business processes, banks can profit from the convenience of using a Web-browser interface to link customers and employees directly to online banking services*.

The problem

Successful online banking applications must provide users with a high level of security and trust. Users must be authenticated and verified, and the privacy and integrity of the data must be maintained. Current security measures built into Web browsers, Web servers and firewall software have not provided most users with the requisite level of confidence to perform sensitive transactions over the Internet.

Digital certificates combined with other cryptographic technologies provide a means of authentication, data integrity and transaction privacy that can create a more secure and trusted environment. Digital certificates are electronic credentials that can be issued by the bank or a trusted third party to authenticate customers who access banking applications over the Internet.

A digital certificate can be compared to a passport or some other type of credential from a trusted authority that provides a means of identification. For a digital certificate to be trusted by all parties, it must be issued in a way that makes it worthy of trust. For example, identification dispensed by a vending machine has a lower level of trust than identification issued by a recognized authority, such as an embassy. Likewise, a digital certificate is only as trustworthy as the authority that issues it and the environment in which it is issued.

Banks require a highly secure registration and certification process to enable the necessary trust required for online applications. This process can be implemented in-house or outsourced to a trusted third party. The registration and certification process has to be flexible enough to meet the bank's unique needs. Some of the issues to be addressed are:

- Reducing the risk of fraud and security breaches associated with online applications
- Maintaining the integrity and privacy of data and transactions
- Protecting current information technology (IT) investments
- Deploying new technologies while controlling cost and complexity
- Growing to meet future business needs
- Supporting the implementation after deployment

The solution

IBM® Vault Registry is a registration and certification solution that integrates a registration authority, certificate authority and IBM eNetwork™ X.500 Directory. Combined with innovative "vault" software, Vault Registry enables security-rich online banking applications based on an enhanced trust model that reduces the risk of compromise to the integrity, authenticity and information privacy of Web-based applications. IBM Vault Registry provides a scalable solution that is designed to help banks meet their customers' growing need for more secure Internet applications.

IBM, a leader in e-business and security solutions, backs the Vault Registry solution with service, support, education and training from both IBM and IBM business partners around the world.

The registration process

The registration approval and certification issuance processes can be transparent to customers who simply complete an online registration form and retrieve a certificate.

Customers can access the bank's online services Web site, select the registration option and complete the form, which may require personal information known only to the customer. The completed registration form is encrypted using Secure Sockets Layer (SSL) technology, which is supported by Web browsers, and can be submitted to the bank for review and approval over the Internet.

At the bank, the completed form would be passed to the registration application, built with IBM Vault Registry. The form would then be checked for completion, either automatically or manually, and compared to a set of rules defined by the bank.

To maintain a trusted and protected environment, all data is encrypted and stored in electronic "vaults" – special areas of memory which can be accessed only after the proper identification is shown.

Each certificate applicant would be assigned a personal "vault" where personal information is stored. The information would be accessible only by the "vault" owner or authorized parties, providing an enhanced level of data privacy and integrity. And, data communicated between "vaults" is encrypted and signed, offering an additional level of security against tampering. This improved level of security shields access by unauthorized internal staff.

After the registration application is approved by the registration authority, a request is sent to the certification authority (CA) to issue a new certificate and send it to the customer's personal "vault." The certificate information would be published on the publicly accessible repository, the X.500 directory, where the customer could now access the personal "vault" and download the digital certificate to the Web browser.

Using the digital certificate

The customer would then be able to access the online banking Web site and select the appropriate banking options. The customer would be prompted to present the digital certificate stored in the Web browser which is sent to the designated banking application.

The bank application can either use the certificate validator to check the validity of the certificate or perform its own checks.

If the validator is used, it checks against the X.500 directory and the Certificate Revocation List (CRL) to make sure the certificate has not been revoked. After the certificate is approved, the applicant is authorized to access the designated application and data.

The benefits of IBM Vault Registry

The benefits of using the IBM Vault Registry solution for enabling an online banking application include:

- Innovative "vault" software that helps protect data and applications from disclosure to unauthorized users, including system administrators
- A flexible approach that enables integration with existing applications and customization for unique business policies and ease of use
- A scalable base that can be extended to support registration and certification across organizational boundaries

IBM Vault Registry is a security-rich solution for customers who want to run their own certification authority, reducing the cost and complexity of assembling a comparable system from multiple vendor offerings. The IBM Vault Registry solution allows seamless integration of all major components for issuing and maintaining certificates, validating the certificates and publishing certificate information.

For more information

Visit the IBM Vault Registry Web site at www.ibm.com/registry.

- A registration process that helps ensure digital certificates are worthy of trust



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*This scenario is a composite based upon typical customer requirements and not intended to represent a specific customer engagement. Individual customers will have different requirements. Contact your IBM representative to discuss your specific needs.



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