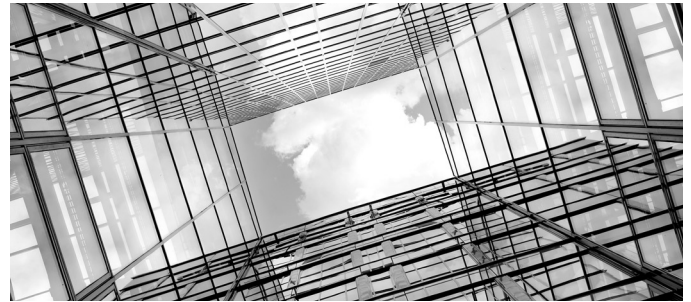


Hardware Security Module

Reliable and Secure, Fully Automated, Unattended Bacs Transactions

Hardware Security Modules (HSMs) are physical devices at the D+H data centers, that house the private keys used in the Public Key Infrastructure (PKI) that underpins Bacstel-IP. The HSM is a physically secure, tamper-proof device that performs the cryptography in place of a user with a smartcard.



The HSM enables a large degree of flexibility in implementing security policies. A full range of options is available, from fully automated unattended operation to multi-user manual signing policies.

The signing of individual payment files, the signing of submissions, establishing a secure connection to Bacstel-IP and the retrieval of reports, are all activities that can engage the HSM and can have their own defined security requirements.

The Hardware Security Module

The HSM is a tamper-resistant device that provides the cryptographic facilities underpinning Public Key Infrastructure (PKI). The HSM is used to secure a multitude of financial applications around the world, ranging from ATM and POS networks to inter-bank funds transfer and share dealing systems. The HSMs are housed at the D+H data centers.

Certificate Signing Request

The public key, along with general information about the Originator, is presented to the sponsoring bank in a certificate signing request. The sponsoring bank issues a digital certificate to the Originator, which will be used in all Bacstel-IP transactions to authenticate the Originator. The certificate is only valid for a fixed period of time, and Bacsactive-IP provides support to ensure certificates are renewed in a timely manner.

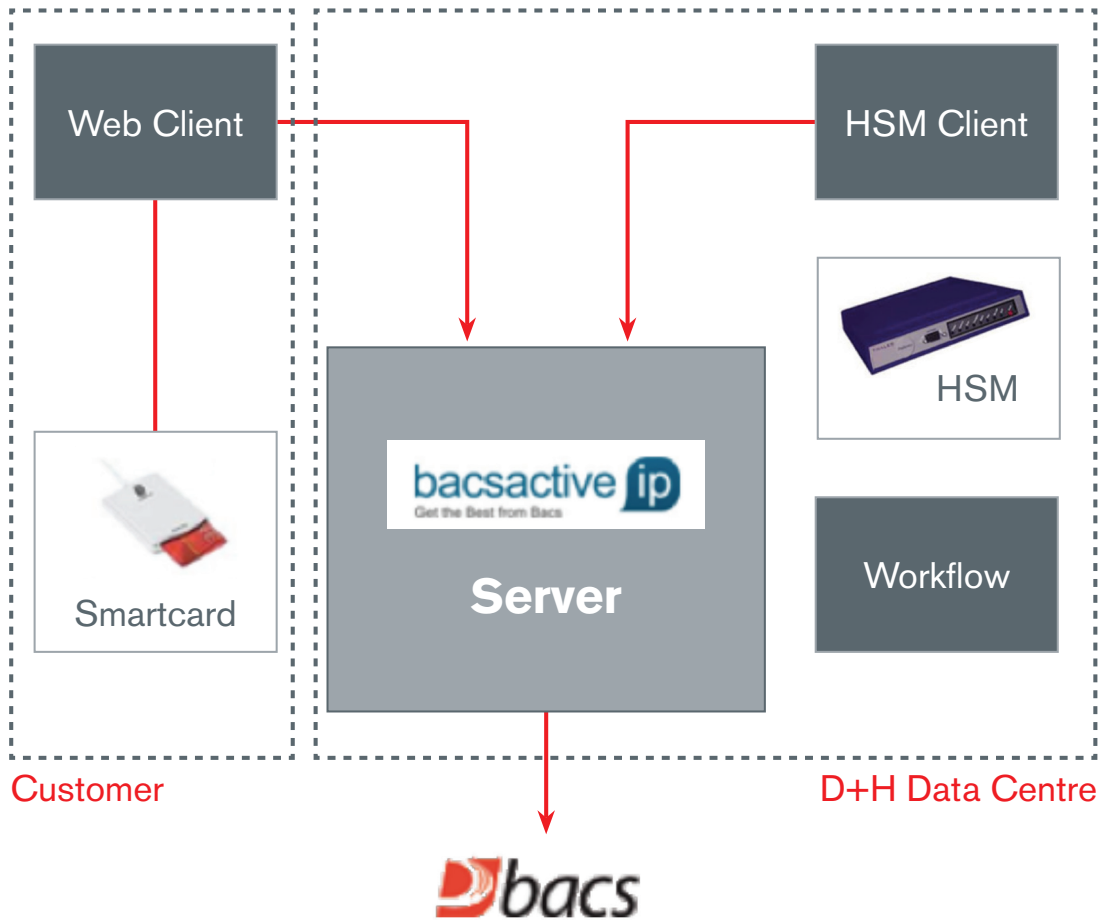
Certificate Management

Many certificates may be stored if required (for example, if multiple sponsor banks are used) and can be called upon to authorise the transactions on behalf of any number of Bacs Service User numbers or Bureau User Numbers. Usage of the certificates is managed automatically by the Bacsactive-IP Application structure. Keys and Certificates from both smart cards and from the HSM are seamlessly supported.

Features & Benefits

- **Automatic operation**
Fully automate all Bacstel-IP activities. Schedule out of hours submissions and report retrieval. Comprehensive support for exception rules and reporting.
- **Increase security**
Store private keys in physically secure, tamperproof devices. Enables higher levels of security to be implemented.
- **CSR and key management support**
Built-in support for managing the HSM keys and for facilitating the Certificate Signing Request process.
- **Flexible policies**
Design security policies to suit your organisation. Implement a range of security levels for signing, submitting or report retrieval.





About D+H

D+H's Global Transaction Banking Solutions Group, formerly known as Fundtech, is the leader in treasury services solutions. D+H is a leading financial technology provider the world's financial institutions rely on every day to help them grow and succeed. Our lending, core, payments, channel, optimization and treasury services solutions are trusted by nearly 8,000 banks, specialty lenders, community banks, credit unions, governments and corporations. Headquartered in Toronto, Canada, D+H has more than 5,500 employees worldwide who are passionate about partnering with clients to create forward-thinking solutions that fit their needs. With annual revenues of more than \$1 billion, D+H is recognized as one of the world's top FinTech companies on IDC Financial Insights FinTech Rankings and *American Banker's* FinTech Forward ranking. For more information, visit www.dh.com.

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