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SD Encryption

Encryption Techniques for Service Desk

Purpose

- Encryption options
- Service Desk with VPN Router Solution
- Service Desk VPN Router Solution Example
- Overview of FDA Electronic Records Electronic Signature (ERES) 21 CFR Part 11
- Digital Signature Example
- SD Encryption Overview
- SD Encryption Sign Form Scenario
- SD Encryption Verify Signature Scenario
- Introduction to NetSource Partners
  - Background & history
  - Expertise
  - Corporate Values
- Contact Information

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Encryption Options

- Our encryption solutions cover the following customer needs:
  - For those customers that require privacy for all communications between client workstation and the Service Desk application.
  - For those customers that must meet FDA requirements for digital signatures of change records.

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Service Desk with VPN Router Solution

- Service Desk (SD) can be used with a VPN router solution to completely encrypt all traffic to the application server using well defined standards (I.e. **IPsec, encryption algorithms, IPv4, IPv6, NAT, PCI, etc.)**
- SD VPN router solution will provide the following between VPN endpoints:
  - **Data Privacy (via encryption)**
  - **Data Integrity (via authentication)**
  - **Data Security (via tunneling) by preventing unauthorized individuals from accessing the system**

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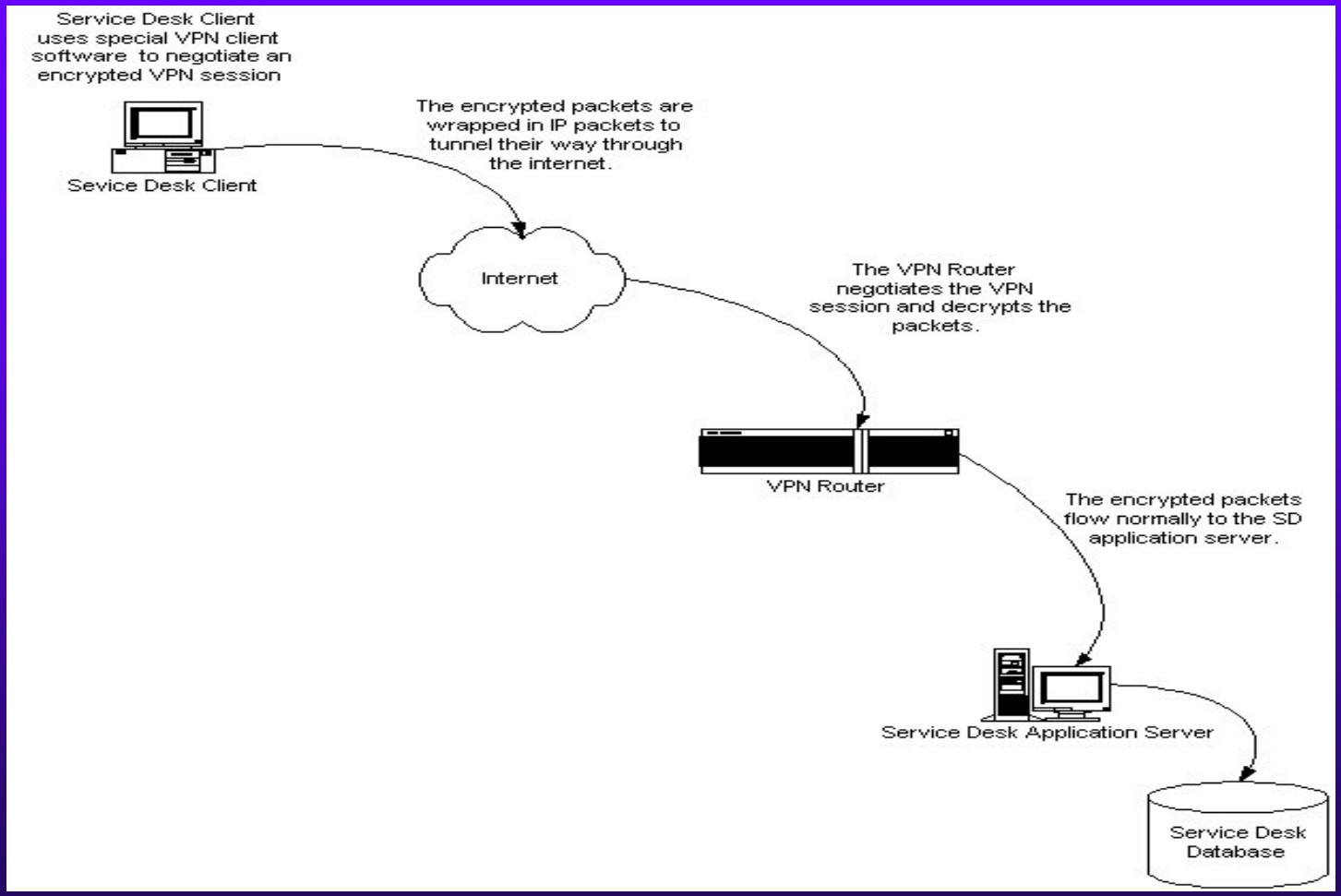
Service Desk VPN Router Solution Example



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FDA ERES 21 CFR Part 11

(a paraphrase version of the FDA requirement)

Records in electronic form that are created, modified, maintained, archived, retrieved, or transmitted, under any records requirements set forth in FDA regulations and under requirements of the federal food, drug, and cosmetic act and the public health service act. Electronic records that meet these requirements will be allowed to use electronic signatures which will be considered equivalent to full handwritten signatures, initials, and other general signings as required by FDA regulations.

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What is Needed to Meet FDA ERES 21 CFR Part 11 Requirement?

- Key, Signature, and Cipher text generating software (PGP, Entrust, etc.)
- The signer's public and private keys certified when used for business/government security
  - Identities are verified by a Registration Authority (VeriSign, management, etc)
  - Certificates are issued by a Certification Authority (Entrust, security personnel, etc.)
  - The certificates are attached to the corresponding Public Key(s)
- A record/document (text or binary)
- A means of associating the digital signature with the record.

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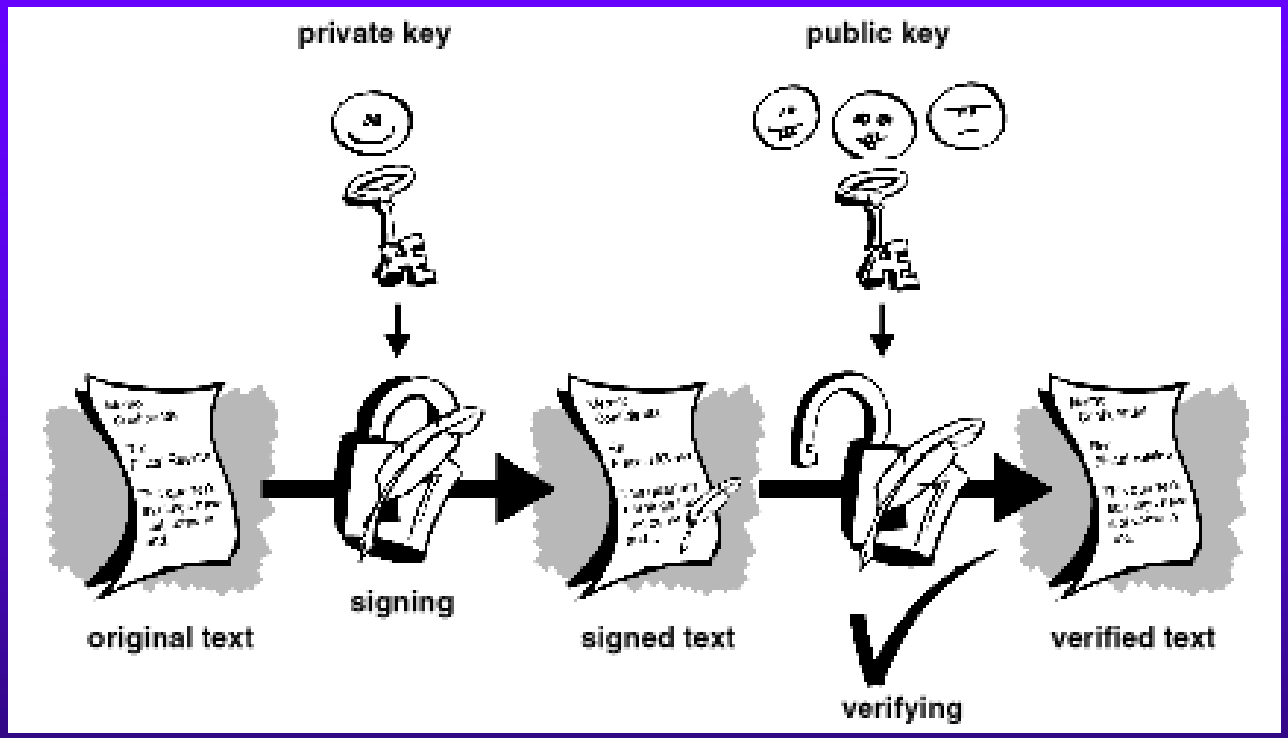
Digital Signature Example



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SD Encryption Overview

- Implemented using HP Service Desk Web-APIs.
- This encryption supports HP Service Desk change records only.
- Current implementation relies on PGP software as the cipher text generating software but can be adapted to other cipher text generating software.
- Allows multiple digital signatures (signers) per record.

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SD Encryption Overview

continued….

- Currently allows the following fields on the change record as text to be signed:
  - ID
  - Description
  - Information
  - Solution
  - Status
  - Project
  - Manager
  - Configuration Item
  - Classification
  - Workaround

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SD Encryption Overview

continued….

- Service Desk Administrative Tasks
  - For each organization determine which fields will be used as part of the signed text.
  - Determine who will have the ability to sign/verify a change record.
  - Determine who will have the ability to display signatures associated with the change record.

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SD Encryption Sign Form Scenario

- A user fills out a change record in the usual way which typically includes any needed approval forms.
- Typically, a series of reviews are needed to obtain all approvals.
- Once all approvals have been obtained, the change record is ready to be signed by the appropriate individuals.

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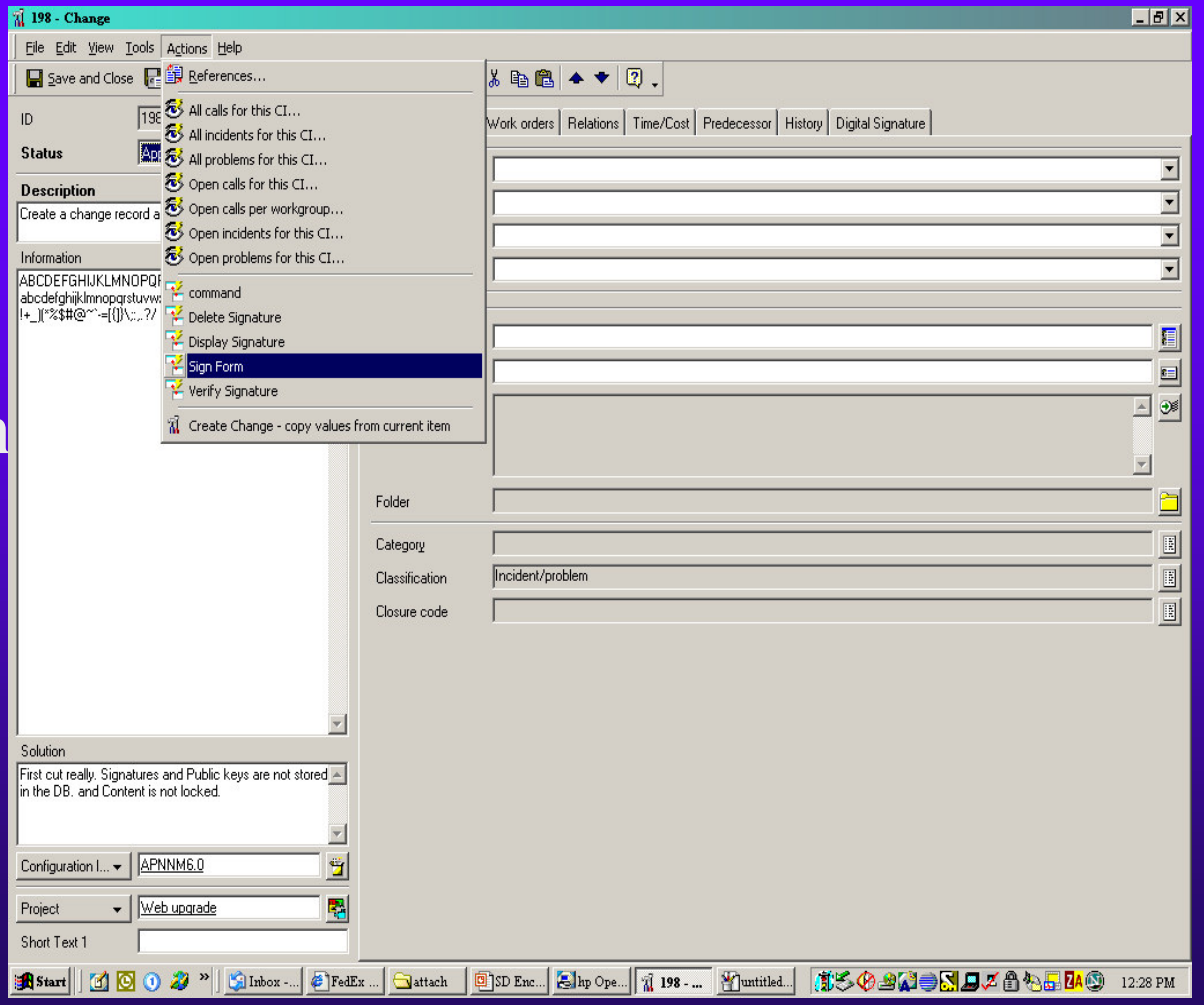
SD Encryption Sign Form Scenario continued….

The user selects the "Sign Form" Smart Action from the "Actions" Menu



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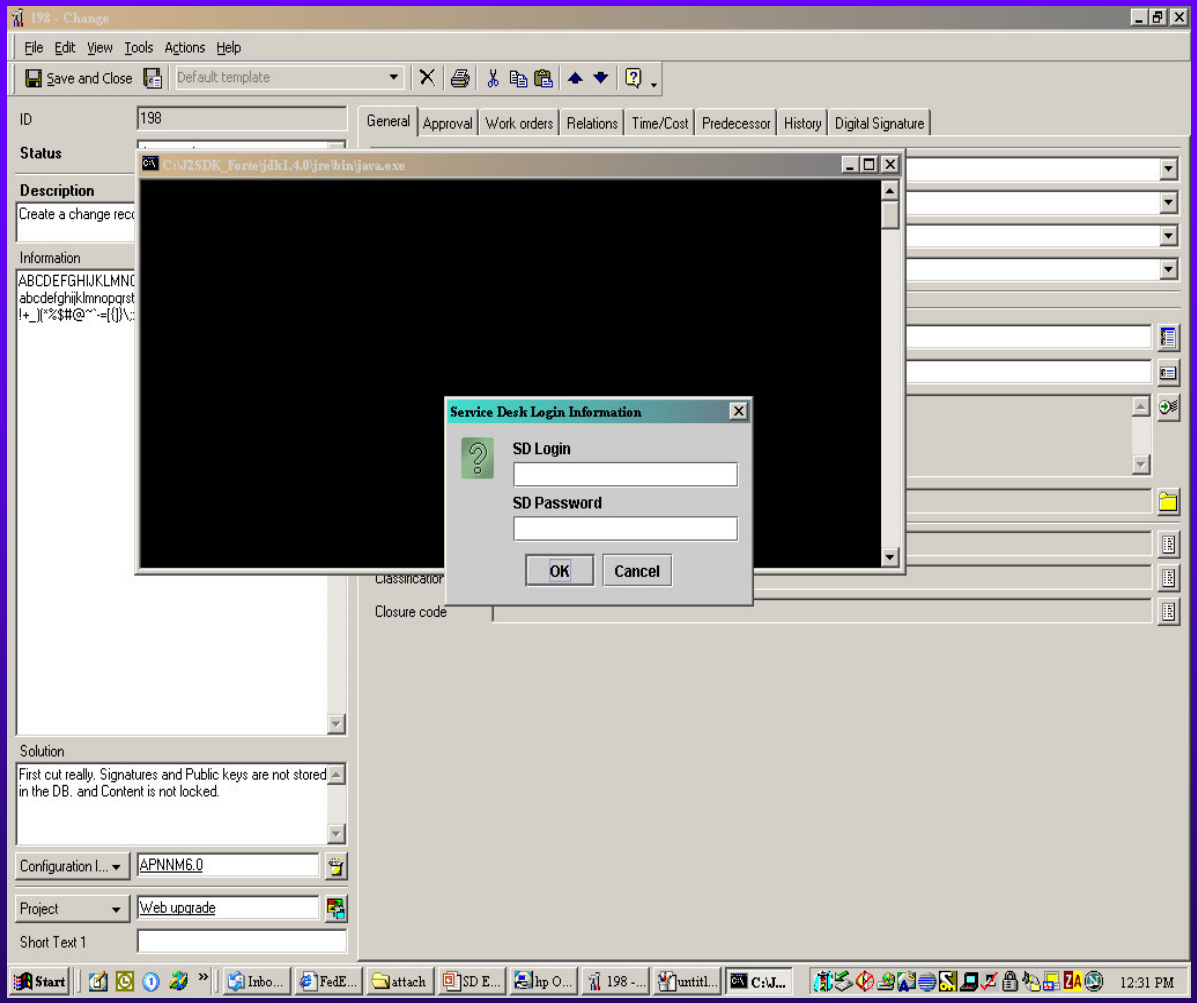
SD Encryption Sign Form Scenario continued….

The user enters their Service Desk login information.



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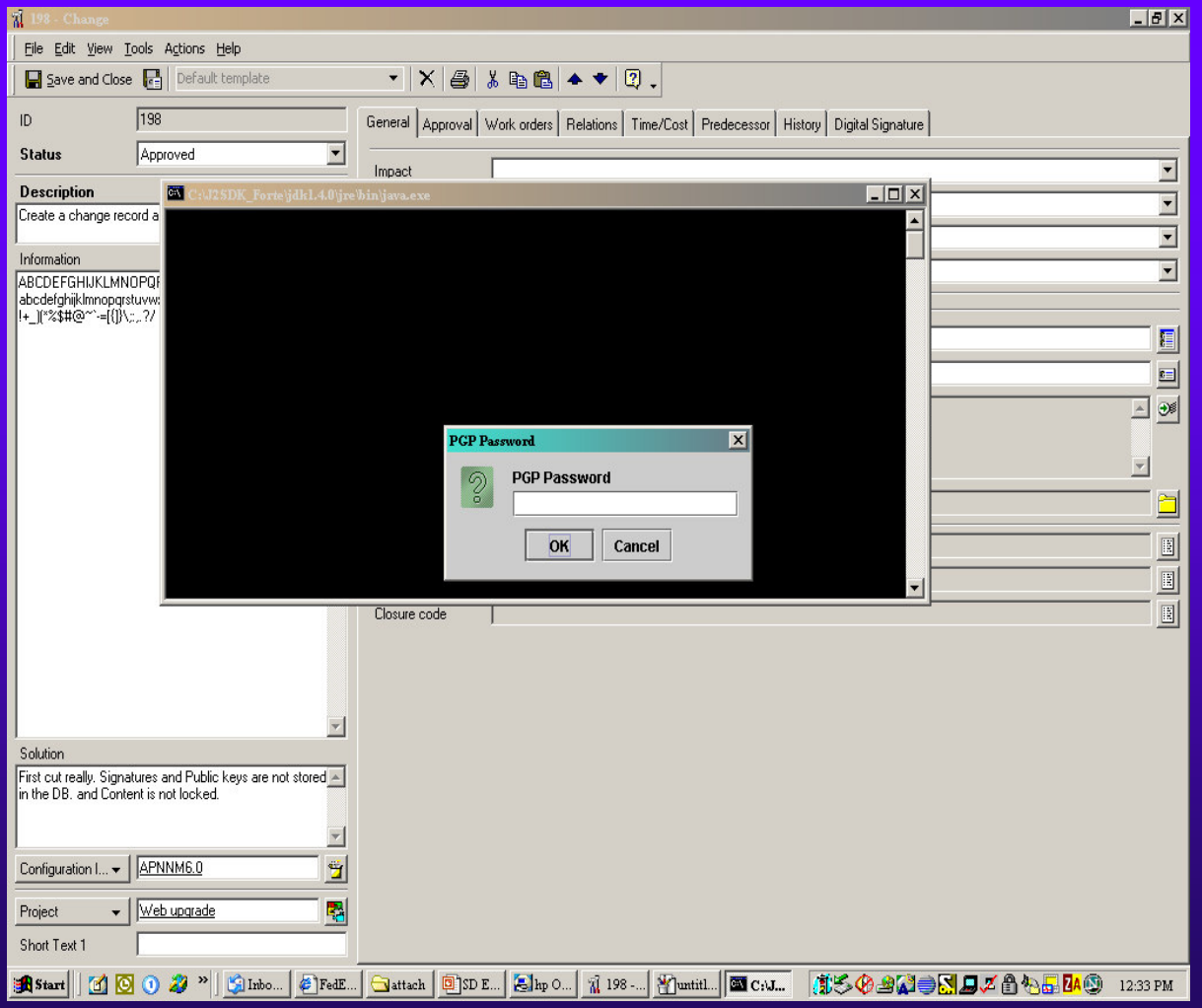
SD Encryption Sign Form Scenario continued….

The user then enters their PGP pass-phrase which will be used by PGP to authenticate them.



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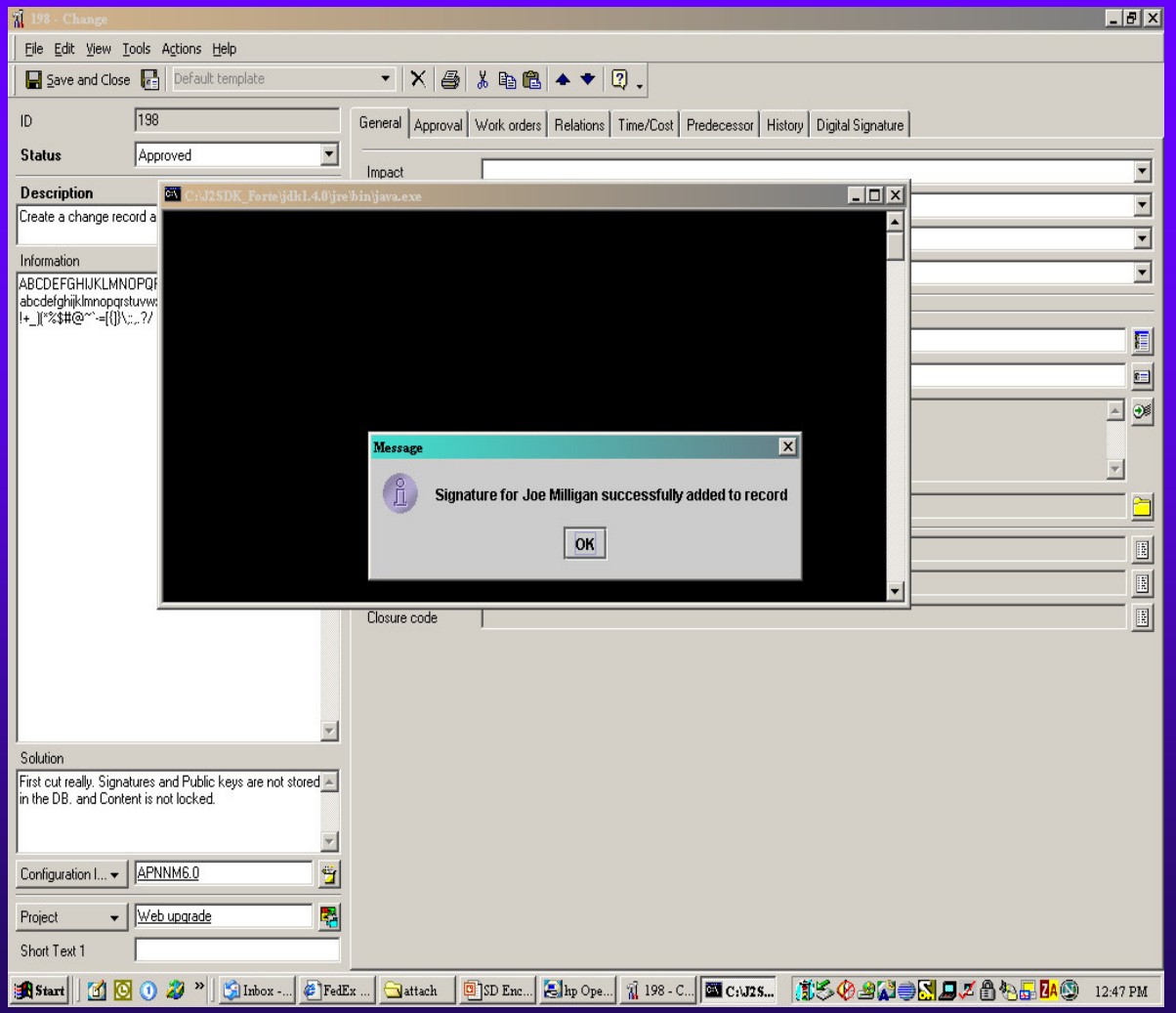
SD Encryption Sign Form Scenario continued….

The private key, along with text from the form has been used to generate a digital signature which is stored with the record.



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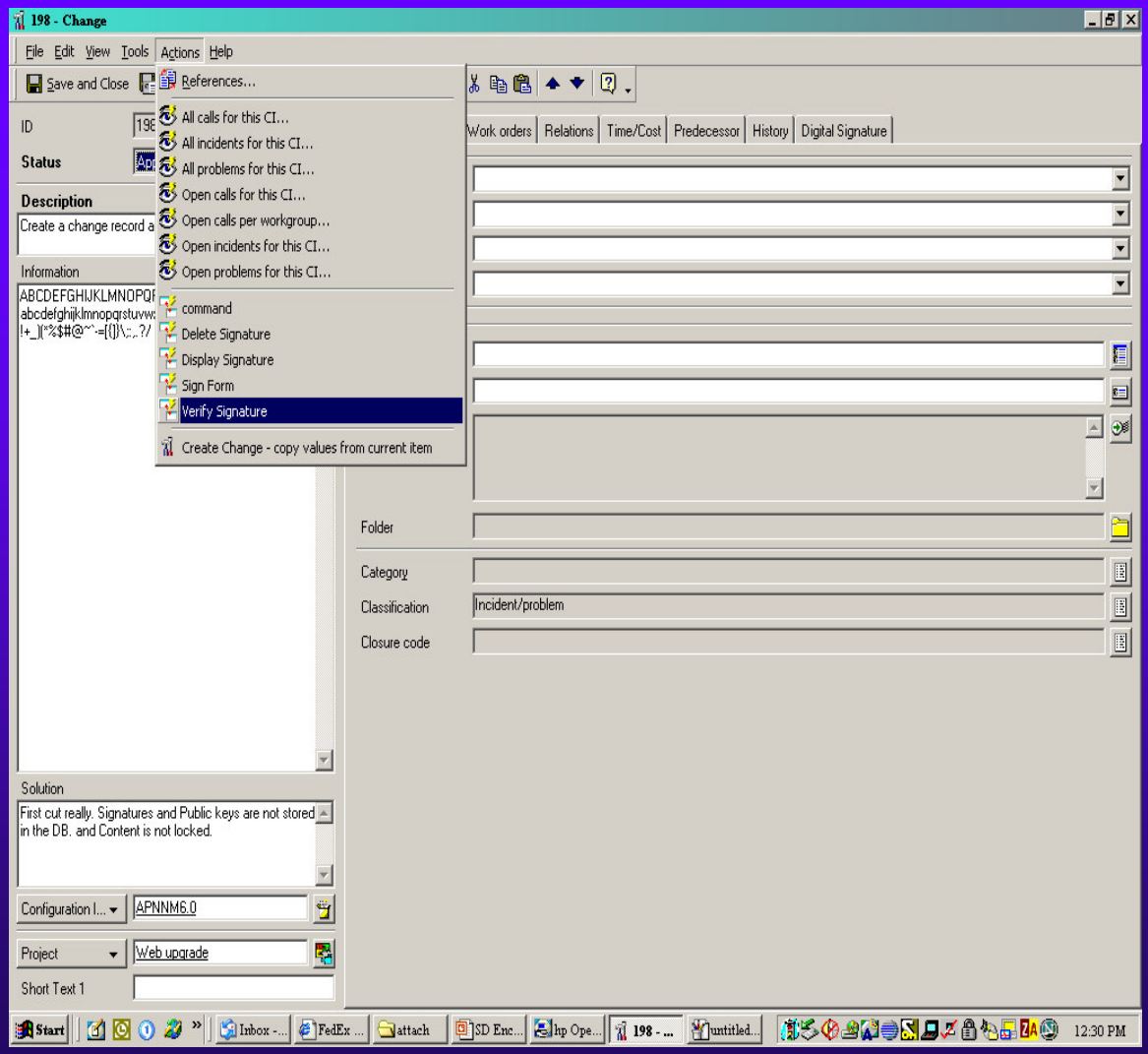
SD Encryption Verify Signature Scenario

The user selects the "Verify Signature" Smart Action from the "Actions" Menu



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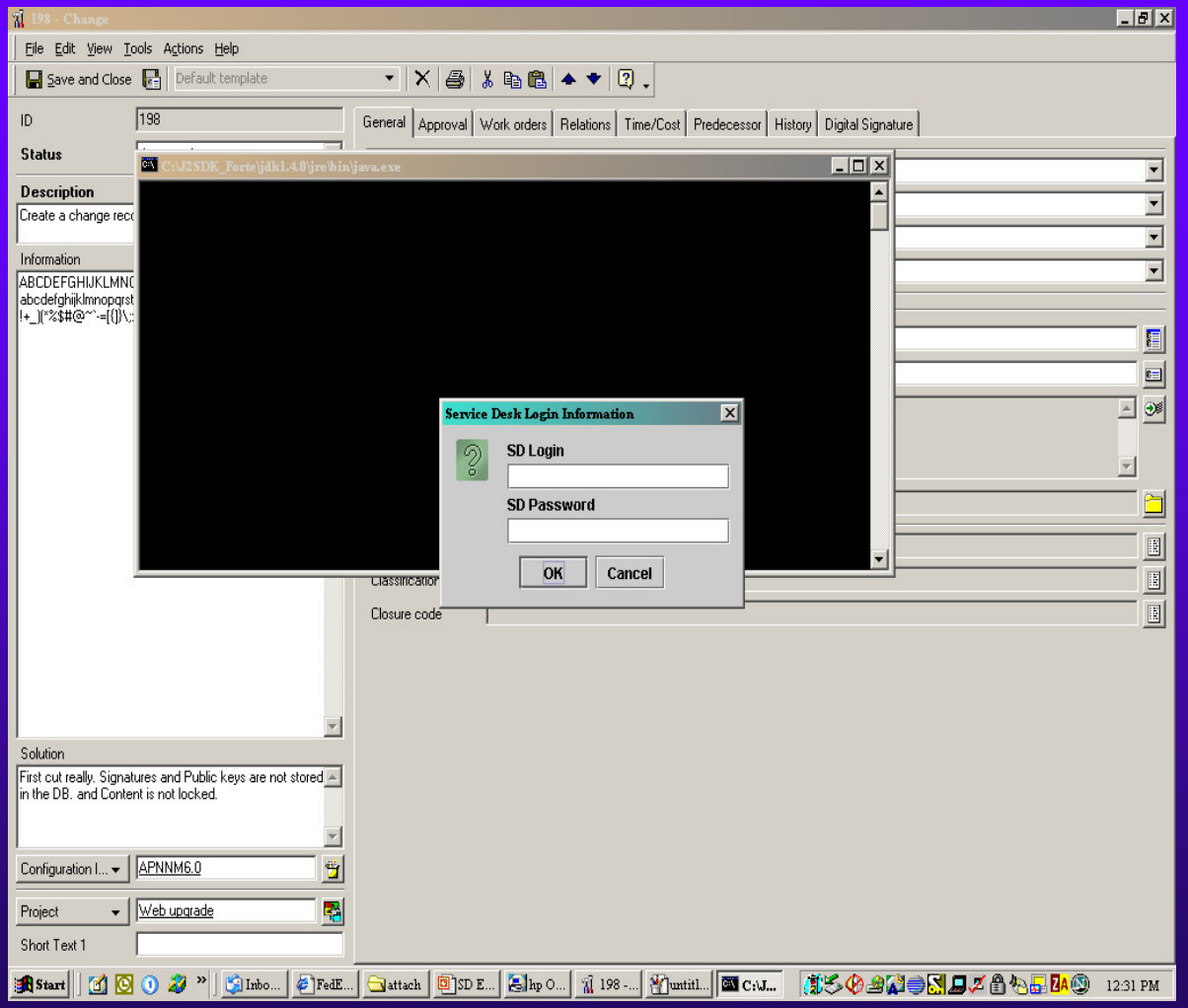

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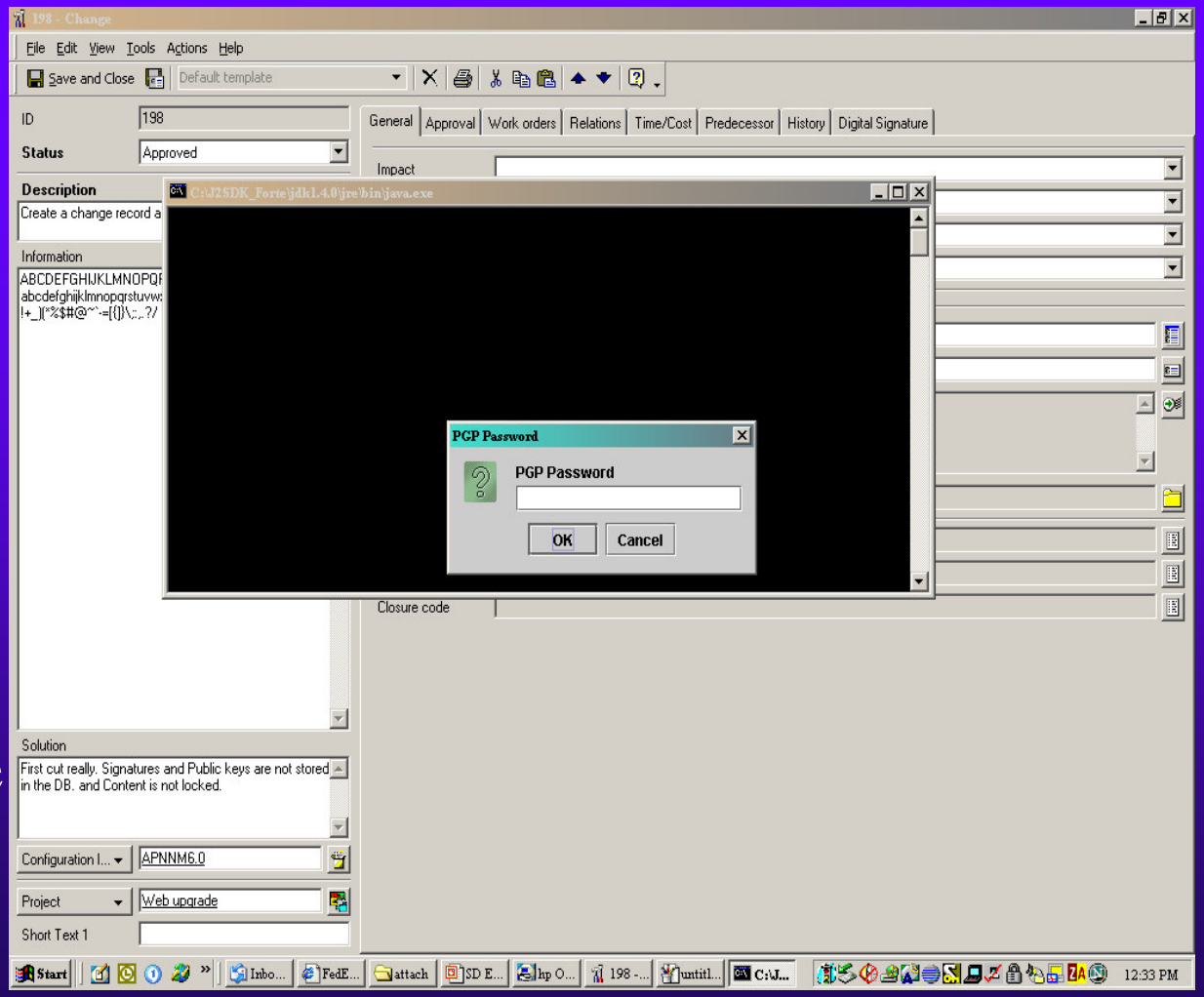

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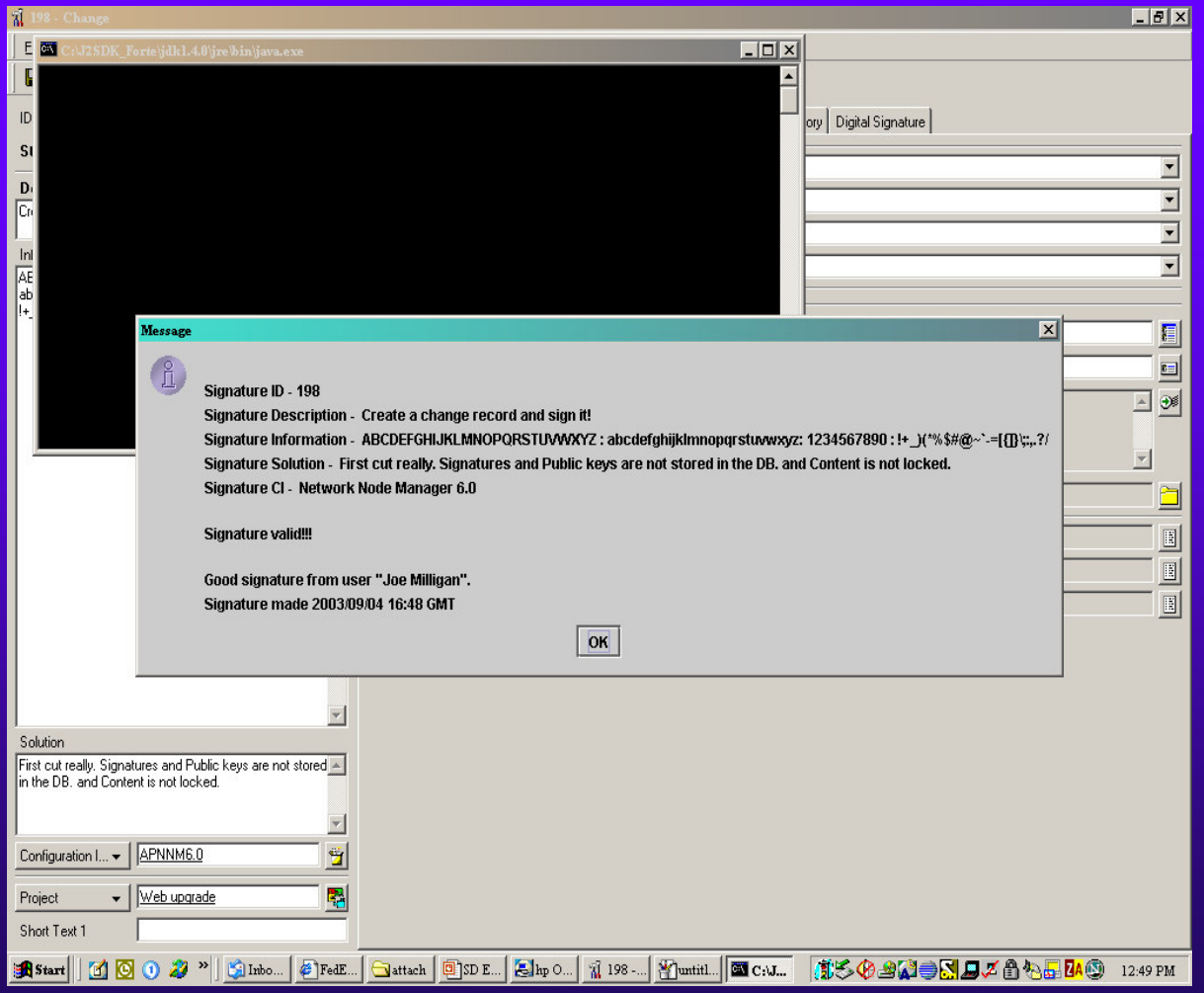
SD Encryption Verify Signature Scenario continued….

Displayed are the fields and their values that were used to create the signature. Also, the validity of the signature.



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NetSource History

- Our company was formed from AT&T Bell Labs Staff in 1996
- Our experience averages over 15 years in the areas:
  - Enterprise operations systems
  - Large-scale data networks
  - Mission critical applications
- Our clients are both Fortune 500 and newer e-business
- Have extensive experiences with HP-Openview tools since their inception

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NetSource Expertise

- Our core competency is in technology engineering and integration. This implies our engineers are experienced in …
  - Project Management
  - Requirements, Architecture, & Design
  - implementation & Quality Assurance
  - Process & Procedures
  - Knowledge transfer and deployment

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NetSource Expertise

continued …

- Current focus
  - Service Management implementation
  - ITIL process development & integration
  - Service management tool integration
- Based on years of HP-Openview experience
  - HP Service Desk
  - Openview Operations
  - Network Node Manager
  - Openview Internet Services
  - And others …

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NetSource Values

- Teamwork
- Excellence
- Customer Focus
- Integrity

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