Central Senate Scrutiny – technical aspects

The Senate count process is illustrated in the **Federal Election 2016: Senate count diagram** and the **Scanning and Security Technology diagram**.

Following election day, ballot papers are reconciled and counted again, the Tally Room on the AEC's website updated and the Senate ballot papers are batched and sent to the Central Senate Scrutiny (CSS). Each batch has an Australian Electoral Commission (AEC) unique identifier, which includes the state, division, polling location, batch number, batch count, date and time of despatch. This identifier enables the AEC to track batches throughout the CSS process.

Once receipted at the CSS, batches of Senate ballot papers are scanned using Kodak i5650 scanning hardware and entered into the *TIS eFlow imaging* software. As part of the process the batch identifier is recorded, along with the date and time of scanning, the scanner number, operator ID and facility.

Verification

Once each Senate ballot paper is digitised and the marks interpreted by TIS eFlow imaging software, any ballot paper with unknown preferences or unusual markings is referred to a human operator for verification of the marks on the ballot paper.

All ballot papers are then passed to a second human operator for full blind entry of all preferences on the ballot paper and comparison with scanned and, if applicable, verified data against a second full blind data entry. Once verified, a record is generated that represents the preferences on the ballot paper.

Review and adjudication

If a discrepancy occurs during the verification process, the image and data preference record is directed to the AEC for adjudication and resolution.

Scrutineers may view the scanning, verification and adjudication processes. If they wish, they may raise challenges for adjudication by the Australian Electoral Officer (AEO).

AEC count systems

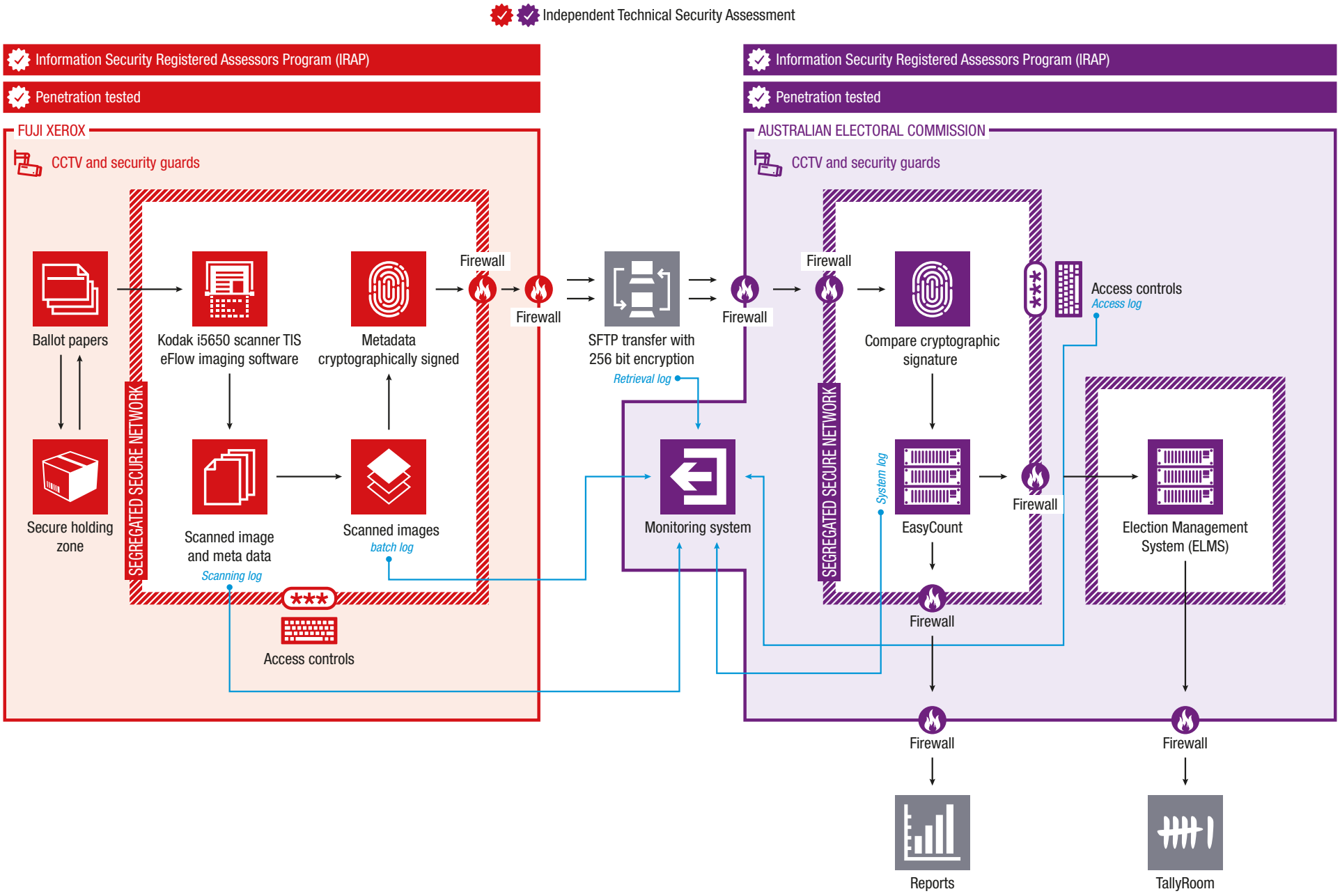
In accordance with best practice, a cryptographic digital signature protects each preference data record from modification. The AEC retrieves the preference record, imports it into the AEC's Senate count system and determines the result.

The AEC systems are segregated in a secured network, continuously monitored for authorised access. Attempts to access the network are audited and the AEC security team are alerted to any unusual or unauthorised attempts to access the network.

Independent review

To ensure the integrity of the count, the CSS process was reviewed by IBM and the Senate count system was certified by the National Association of Testing Authorities. It was independently reviewed for security vulnerabilities by a specialist agency and accredited under the Australian Information Security Registered Assessors Program.

Scanning and Security Technology



16_0794 Authorised by Tim Courtney, 50 Marcus Clarke Street, Canberra ACT.