

# **Standard Metrics for Knowledge-Based Authentication**

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# Topics

- Purpose
- Goal of Knowledge-Based Authentication
- Possible Outcomes of Knowledge-Based Authentication
- Standardized Error Measurement Techniques
- Qualifications Based on Measured Error Rates
- Advantages
- Disadvantages

# Purpose

- To Propose Standardized, Outcome-Focused Metrics for Evaluation of Knowledge-Based Authentication Methodologies

# Goal of Knowledge-Based Authentication

- Error-Free Authentication; 100% Assurance that a User is Who He/She Claims to be

# Possible Outcomes of Knowledge-Based Authentication

- Error Free
- Type 1 Error – False Rejection of a Claimed Identity
- Type 2 Error – False Acceptance of a Claimed Identity

# Standardized Error Measurement Techniques

- Periodic Field Follow-Up Investigations Conducted on a Representative Sample
- Periodic Penetration Testing

# Qualifications Based on Measured Error Rates

- Standardization of Error Measurement Techniques as Opposed to Identity Authentication Methods
- Minimum Acceptable Error Rates and Confidence Intervals Established for Each Assurance Level

# Advantages

- Higher Confidence in Claimed Error Rates
- Provides Realistic Basis for Comparison
- Provides Protection for Proprietary Business Information
- Encourages and Rewards Innovation



# Disadvantages

- Expensive
- Ongoing
- Increased Oversight Responsibilities
- Ongoing Research to Improve Measurement Techniques