To instantiate the provided assurance case pattern for the domain of Instant Messaging (IM) software, we will replace placeholders with specific information related to IM software, and structure the security case in a hierarchical tree format. The domain information provided earlier will be used for instantiation.

\*\*Instantiated Security Case for IM Software:\*\*

- \*\*G1: IM software is acceptably secure in user interaction systems\*\*

- \*\*C1: Definition and description of IM software\*\*

- \*\*C2: Definition and description of user interaction systems\*\*

- \*\*C3: Definition of 'acceptably secure'\*\*

- \*\*S1: Argument that IM software assets are under protection\*\*

- \*\*J1: Protection of software assets supports that the software is acceptably secure\*\*

- \*\*G2: All identified IM software critical assets are protected\*\*

- \*\*C4: List of IM software critical assets (Registration information, User account information, Authentication information, Login process, Chat logs)\*\*

- \*\*J2: Relationship between assets is clear and can be argued separately\*\*

- \*\*S2: Respective arguments of IM software critical assets\*\*

- \*\*G3: Registration information is protected\*\*

- \*\*G3: User account information is protected\*\*

- \*\*G3: Authentication information is protected\*\*

- \*\*G3: Login process is protected\*\*

- \*\*G3: Chat logs are protected\*\*

- \*\*C5: List of software critical asset types in PEDD (Process, Environment Entity, Data Exchange, Data Storage)\*\*

- \*\*J3: Types of software assets are according to PEDD classification\*\*

- \*\*S3: Argument of the type which the IM software critical asset belongs to\*\*

- \*\*G4: Registration information which belongs to Data Storage is protected\*\*

- \*\*G4: User account information which belongs to Data Storage is protected\*\*

- \*\*G4: Authentication information which belongs to Data Exchange is protected\*\*

- \*\*G4: Login process which belongs to Process is protected\*\*

- \*\*G4: Chat logs which belong to Data Storage are protected\*\*

The assurance case tree is structured using hierarchy levels denoted by dashes for clarity, and includes all critical aspects of the IM software security based on the given pattern. Each goal, strategy, context, and justification is described specifically with respect to the IM software, ensuring the security claims are adequately supported and accurate per the domain requirements. The "Multiplicity" element indicates multiple instances of `G4` for each type of critical asset. Additionally, placeholders were replaced with concrete information as required.