Certainly! Here's a simple and structured assurance case for the BlueROV2 system using Goal Structuring Notation (GSN), displayed in a hierarchical tree format:

```

- Goal: Ensure the BlueROV2 system is operationally safe and effective.

- Strategy: Argue over safety, reliability, and performance.

- Goal: Ensure the BlueROV2 system is safe.

- Strategy: Argue over hardware safety, software safety, and procedural safety.

- Goal: Ensure the hardware is safe.

- Solution: Use IEC 61508 safety standard for electronic hardware.

- Context: Hardware specifications and design documents.

- Evidence: Test reports, inspection records.

- Goal: Ensure the software is safe.

- Solution: Develop software according to ISO/IEC 12207 for software lifecycle processes.

- Context: Software development plan.

- Evidence: Code reviews, static analysis reports.

- Goal: Ensure proper operational procedures are in place.

- Solution: Establish operational and emergency procedures following industry best practices.

- Context: Operational manuals, emergency procedures.

- Evidence: Training records, drill reports.

- Goal: Ensure the BlueROV2 system is reliable.

- Strategy: Argue over redundancy, maintenance, and testing practices.

- Goal: Ensure system redundancy.

- Solution: Implement redundant systems for critical components.

- Context: System architecture design.

- Evidence: Component redundancy diagrams, fault tolerance analysis.

- Goal: Ensure regular maintenance is conducted.

- Solution: Follow a scheduled maintenance plan.

- Context: Maintenance schedule.

- Evidence: Maintenance logs, inspection records.

- Goal: Ensure rigorous testing.

- Solution: Perform environmental and operational testing.

- Context: Testing protocols.

- Evidence: Test results, qualification reports.

- Goal: Ensure the BlueROV2 system performs effectively.

- Strategy: Argue about operational capabilities, user feedback, and compliance.

- Goal: Ensure operational capabilities meet requirements.

- Solution: Validate capability through field tests and simulations.

- Context: Performance specifications.

- Evidence: Field test reports, simulation results.

- Goal: Ensure positive user feedback.

- Solution: Conduct systematic user surveys and feedback collection.

- Context: User engagement plan.

- Evidence: User feedback records, satisfaction surveys.

- Goal: Ensure compliance with regulatory standards.

- Solution: Assess system against relevant underwater vehicle regulations.

- Context: List of applicable regulations.

- Evidence: Compliance audit reports, certification documents.

```

This structure provides a clear approach to demonstrating that the BlueROV2 system is safe, reliable, and performs effectively. Each goal is supported by a strategy that divides it into manageable parts, and further backed by solutions, context, and evidence to ensure comprehensive assurance.