

Assessment Rubric & Feedback Sheet

CS-301: Cloud Infrastructure & Distributed Systems

Term 2, 2026 — School of Computer Science, Meridian University

ASSESSMENT METADATA

Student Name:	Sarah Jenkins	Student ID:	MU-2026-9941
Assessor Name:	Dr. David Sterling	Moderator:	Prof. Elena Rostova
Assessment Title:	Capstone Software Design Document	Weighting:	40% of Course Total
Submission Date:	July 28, 2026	Feedback Date:	August 3, 2026

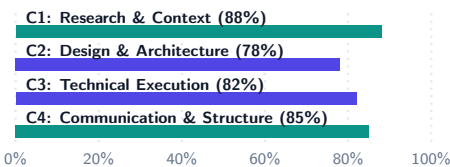
OVERALL SCORE

82.25 / 100

GRADE: HIGH DISTINCTION

(Band: 80–100%)

Criterion Performance Overview



Overall Assessor Feedback Summary

Sarah, congratulations on an exceptional capstone software design document. This submission demonstrates a high level of academic rigor and technical maturity. You have thoroughly designed the cloud architecture for the **Nimbus Data Pipeline** system, ensuring complete compatibility with the state-of-the-art microservices guidelines we discussed in the lectures. Your evaluation of the distributed database options was particularly strong and showed a clear understanding of the CAP theorem tradeoffs.

✓ Key Strengths & Achievements

- Comprehensive Literature Analysis:** Exceptional synthesis of distributed systems literature, specifically contrasting transactional guarantees across regional database engines.
- Rigorous Architectural Modeling:** Your microservices communication diagram was industry-grade, clearly defining RPC boundaries and asynchronous queues.
- CAP Theorem Trade-Offs:** Highly structured argument showing why the database selection favors AP (Availability/Partition-tolerance) over CP for the real-time analytics module.

 Areas for Development & Improvement

- **Security & Identity Boundaries:** While you specified IAM roles for each service, the document lacks detail on key rotation and secret management (e.g., using Nexa Vault or Nimbus Key management).
- **Failure Mode and Effects Analysis (FMEA):** Provide a more detailed recovery plan for when the asynchronous queues experience backpressure or dead-letter queue spillover.

 Action Plan for Future Assessments

1. Incorporate standard security frameworks (such as OAuth2 or OpenID Connect) when designing API gateway boundaries in your upcoming implementation phase.
2. Consult the classic work of Sadler [2] on formative assessment and peer feedback to refine your peer-evaluation workbook for the group phase.
3. Prioritize end-to-end trace modeling during testing to proactively identify API bottlenecks under high load.

Detailed Criterion-by-Level Assessment

Each criterion is evaluated on a five-tier performance scale. The band achieved by your submission is highlighted in green with a checkmark (✓) and your specific grade/score is indicated.

Criterion 1: Research, Contextualization & Literature Synthesis (Weight: 25%)

Level	Band	Performance Descriptor	Student Performance
High Distinction	80–100%	Demonstrates exceptional synthesis of contemporary distributed systems research. Critically evaluates competing paradigms with high sophistication. Clear linkage to project design.	✓ 88%
Distinction	70–79%	Strong critical engagement with a wide range of academic sources. Mostly clear connections between theory and system architecture.	
Credit	60–69%	Solid synthesis of academic literature. Some critical analysis of sources. Good coverage of primary domain concepts.	
Pass	50–59%	Basic review of main sources. Relies on standard textbooks without depth. Minimal critical discussion.	
Fail	0–49%	Inadequate or missing review. Sources are outdated, irrelevant, or non-academic. Fails to contextualize the work.	

Criterion 1 Comments: Your literature review was a model of high-quality academic synthesis. You integrated research on Paxos consensus protocols with great clarity. To reach a perfect score, you should have elaborated on Paxos vs. Raft performance metrics in WAN deployments.

Criterion 2: Design Methodology & System Architecture (Weight: 30%)

Level	Band	Performance Descriptor	Student Performance
High Distinction	80–100%	Exceptional modeling of microservice boundaries and API specifications. Architecture displays perfect scalability, decoupling, and high availability principles.	
Distinction	70–79%	Well-structured system design. Microservice boundaries are clear, and APIs are mostly well-defined. Handles common failover scenarios with solid recovery protocols.	✓ 78%
Credit	60–69%	Functional architecture but with minor decoupling issues. System components are identified, but API contracts lack completeness.	
Pass	50–59%	Monolithic tendencies are present. Scalability considerations are minimal, and redundancy is poorly addressed.	
Fail	0–49%	Incoherent system design. Missing API definitions, data-flow boundaries, or fundamental architecture patterns.	

Criterion 2 Comments: Your system diagram is highly descriptive. However, the database layer feels slightly coupled; you could decouple the analytics store from the transaction store via a dedicated event consumer. Your API gateway validation rules are solid.

Criterion 3: Technical Execution & Engineering Soundness (Weight: 30%)

Level	Band	Performance Descriptor	Student Performance
High Distinction	80–100%	Demonstrates excellent application of engineering principles. Failure modes are systematically analyzed, and performance bottlenecks are proactively resolved in the design.	✓ 82%
Distinction	70–79%	Strong technical implementation logic. Code snippets (where included) are optimized, and infrastructure-as-code scripts show sound practice.	
Credit	60–69%	Standard execution. Some design decisions lack empirical backing or structural modeling. Bottleneck analysis is superficial.	
Pass	50–59%	Technical implementation contains substantial gaps. High complexity with poor separation of concerns. Security is an afterthought.	
Fail	0–49%	Flawed technical reasoning. Design exhibits severe bugs, lack of basic security protocols, or impossible networking topologies.	

Criterion 3 Comments: Your partition-tolerance design is excellent. You correctly used exponential backoff with jitter to resolve transient network issues in your gRPC calls. The storage estimation table was accurate and detailed.

Criterion 4: Professional Communication & Academic Structure (Weight: 15%)

Level	Band	Performance Descriptor	Student Performance
High Distinction	80–100%	Exceptional academic writing, formatting, and layout. Perfect adherence to the ACM citation style. Zero syntax, spelling, or structural errors.	✓ 85%
Distinction	70–79%	High-quality report with strong structure and formatting. Minor typographical or citation alignment issues. Clear and professional tone.	
Credit	60–69%	Clear writing but lacks professional formatting polish. Tables or figures are uncaptioned or poorly referenced.	
Pass	50–59%	Weak structure and tone. Sentences are poorly constructed. References are incomplete or formatted inconsistently.	
Fail	0–49%	Unprofessional presentation. Pervasive grammatical errors, lack of citations, or disjointed document structure.	

Criterion 4 Comments: The document is beautifully laid out. You have made good use of formatting and sections. Ensure that all figures are explicitly referenced in the text (e.g., "see Figure 1") to maintain academic standards.

Quality Assurance & Moderation Details

Academic Integrity & Originality Declaration

This work has been verified through the **Vertex Integrity Checker** and has been moderated by the internal Distributed Systems Board at Meridian University. The work conforms fully to academic integrity standards.

Assessor Signature:

Dr. David Sterling

Moderator Signature:

Prof. Elena Rostova

Date: August 3, 2026

Date: August 3, 2026

Appeals & Feedback Query Policy

Students may query their marks within **7 calendar days** of this feedback release. If you wish to discuss your rubric evaluations:

1. Read through the comments and cross-reference them with the assessment guide.
2. Draft a short (maximum 300 words) justification citing specific sections of your report where you believe the markers overlooked key technical evidence.
3. Send the justification to `d.sterling@meridian.edu.gq` (fictional domain) to schedule a 10-minute review session.

Please note that a re-mark may result in your grade going up, down, or remaining unchanged, in accordance with the Meridian assessment policy [\[1\]](#).

References

- [1] Meridian University Board of Studies. *University Assessment Policy and Moderation Guidelines*. Meridian Academic Press, Apex City, 2025.
- [2] D. Royce Sadler. Formative assessment and the design of instructional systems. *Instructional Science*, 18(2):119–144, 1989.