**Subject:** 🚧 Implementation Completed: Semantic Model Routing Service (Pending Testing)

Hi Team,

The implementation of the **Semantic Model Routing Service** has been completed and is now available in **Branch A**. This new service introduces a robust mechanism for managing refresh execution across our distributed Power BI semantic models.

### **🔍 High-Level Summary**

Key functionality includes:

* ✅ **Model Routing and Switching:** Dynamically toggles reader and writer roles to ensure availability and freshness.
* ✅ **Health Verification:** Before starting any refresh cycle, the service checks all worker models. If any are in a FAILED or UNHEALTHY state, the cycle is aborted to prevent assigning both models as writers.
* ✅ **Failure Mitigation:**
  + If the **first model in the cycle fails**, the entire cycle is aborted.
  + If a **subsequent model fails**, a single retry is attempted. If it fails again, the process halts and awaits recovery of the failed model.
* ✅ **Final Ready Event Dispatch:** As soon as the **first model is successfully refreshed**, the system emits the final "ready" event. This ensures downstream components can begin consuming fresh data without waiting for the full cycle to complete.
* ✅ **Comprehensive Logging:** All role transitions, refresh outcomes, and failure scenarios are logged for traceability and diagnostics.

🔬 **Next Step:** Testing is pending. The code is available in **Branch A** — feel free to review and begin integration testing as needed.

Let me know if you'd like a walkthrough or have any feedback.

Best regards,  
 Julio