

MCAP Architecture

Mainframe Context Aware Protocol for AI-Driven Legacy Modernization (MCP Extended + A2A Integration)

Legacy Environment

Existing mainframe systems and applications

COBOL Programs

DB2 Schemas

JCL Scripts

CICS
Applications

Copy Books

Secure Legacy Interface

Secure bridge between Legacy systems and AI Agents

Data Sanitisation

Read-Only Access

Compliance Layer

Version Control

Protocol Foundation

Core MCAP framework extending MCP and A2A protocols

MCP Extensions

Context Engine

A2A Orchestrator

Semantic Mapper

Security
Framework

Multi-Agent System

AI agents working collaboratively to analyze and transform code

Analysis Agent

Domain Agent

Security Agent

Generation Agent

Review Agent

Human-AI Collaboration

Subject matter expert validation and oversight

SME Validation

Visual Dashboard

Approval
Workflows

Audit Trails

Modernized Output

Cloud-native applications with preserved business logic

Java
Applications

Spring Boot
Services

REST APIs

Cloud-Native
Architecture

Documentation