Diagnostic Analysis Report

Customer Problem

Whenever I try to send a payload to the endpoint I created, the micro integrator gives an error

Log Analysis

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Summary of Findings:
The logs show multiple successful invocations logging "Welcome to HealthcareService"
until an error occurs.
At 14:34:19, the system encounters a JSON parsing error due to an illegal character
"<d>" which leads to an XMLStreamException.
The error appears during the processing of the payload in the JSON-to-XML conversion
phase, indicating that the input payload might be malformed or not conforming to the
expected JSON format.
The stack trace clearly highlights failures in reading and processing the JSON
payload, pointing to issues in the classes responsible for parsing and converting the
payload.
The timing indicates that the error is intermittent as multiple successful requests
are interleaved with the failure, suggesting that only specific payloads or conditions
trigger this issue.

SUSPECTED_CLASSES: [{'package': 'org.apache.synapse.commons.staxon.core.base',
'class': 'AbstractXMLStreamReader', 'issue_line': 245}, {'package':
'org.apache.synapse.commons.staxon.core.json', 'class': 'JsonXMLStreamReader',
'issue_line': 88}, {'package': 'org.apache.synapse.commons.json', 'class': 'JsonUtil',
'issue_line': 921}, {'package':
'org.apache.synapse.commons.staxon.core.json.stream.impl', 'class': 'JsonScanner',
'issue_line': 777}, {'package': 'org.apache.synapse.commons.json', 'class':
'JsonDataSource', 'issue_line': 154}]

ERROR_MESSAGE: "Could not get parser from data source for element jsonObject
javax.xml.stream.XMLStreamException: java.io.IOException: Illegal character: <d>"
```

Comprehensive Thread Analysis

Not applicable - no problematic threads identified.

Conclusions and Recommendations

Diagnostic Conclusion:
The root cause is that certain payloads contain malformed JSON data, specifically an illegal character ("<d>"), which triggers a JSON parsing error during the JSON-to-XML conversion process. This error is thrown in the conversion classes responsible for parsing and transforming the JSON input. The issue appears intermittently, indicating that only specific payloads or conditions in the input data lead to this error.

Actionable Steps:
Review and validate the JSON payloads against the expected schema to ensure they do not include invalid characters or unexpected XML fragments.
Implement input sanitization and validation logic in the client and server to catch malformed JSON before it reaches the conversion layer.
Enable detailed logging around the JSON-to-XML conversion process to better identify the conditions causing the error.
Develop and execute unit tests and integration tests with a variety of payloads, including edge cases, to ensure robustness of the conversion process.
If necessary, update the JSON parsing libraries or error handling code in the suspected classes to provide more informative errors and better handle unexpected characters in the payload.

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