This document describes the suite of tests for this specific service.

As the opcodes are available to any service, the test cases for the opcodes used in this test are described in their own test case documents, to avoid duplication across services

## Starting assumption

The unit under test has a valid node number, and is in normal running mode

# Request extended data for this service

Read the extended data for this service, using service index number of this service

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| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_RQSD | 0x78 | Node number and service index number |

# Read all the node variables

Read all the node variables, the service index number of this service is used when storing the returned data

|  |  |  |
| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_NVRD | 0x71 | Node number and service index number |

# Test count of node variables matches

Test that the number of node variables read in the previous test matches the count returned in node parameter[6] in previous test suites

# Test last node variable

Boundary test using the node parameter count as the node variable index to read

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| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_NVRD | 0x71 | Node number, node variable index and service index number |

# Test invalid node variable

Boundary test using the node parameter count + 1 as the node variable index to read, expecting an error returned

|  |  |  |
| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_NVRD\_INVALID\_INDEX | 0x71 | Node number, node variable index and service index number |

# Test NVRD short message

Expect to get a GRSP message when sending a short NVRD message

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| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_NVRD\_SHORT | 0x71 | Node number, node variable index and service index number |

# Test NVSET first node variable

Expect to get a WRACK message when sending a NVSET for the first node variable, uses existing node variable value previously read so it’s non-destructive

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| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_NVSET | 0x96 | Node number, service index number, node variable index = 1 and node variable value |

# Test NVSET last node variable

Expect to get a WRACK message when sending a NVSET for the last node variable, uses existing node variable value previously read so it’s non-destructive

The number of node variables will have been previously reported in node parameter [6]

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| Test case | Opcode | Parameters |
| test\_NVSET | 0x96 | Node number, service index number, last node variable index and node variable value |

# Test NVSET\_INVALID\_INDEX

Expect to get a CMDERR message when sending a NVSET with an invalid node variable index

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| Test case | Opcode | parameters |
| test\_NVSET\_INVALID\_INDEX | 0x96 | Node number, service index number, invalid node variable index and node variable value |

# Test NVSET\_SHORT

Expect to get a GRSP message when sending a short NVSET message

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| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_NVSET\_SHORT | 0x96 | Node number, service index number, node variable index and node variable value |

# Request diagnostics for this service

Read all the diagnostic data for this service, using service index number of this service, and diagnostic number 0

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| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_RDGN | 0x87 | Node number, service index number and diagnostic number 0 |

# Request first diagnostic for this service

Read the first diagnostic data for this service, using service index number of this service, and diagnostic number 1

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| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_RDGN | 0x87 | Node number, service index number and diagnostic number 1 |

# Request last diagnostic for this service

Read the last diagnostic data for this service, using service index number of this service, and diagnostic number MaxDiagnostic

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| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_RDGN | 0x87 | Node number, service index number and diagnostic number MaxDiagnostic |

# Test invalid diagnostic for this service

Read the last diagnostic data + 1 for this service, using service index number of this service, and diagnostic number MaxDiagnostic + 1, expecting a GRSP message in response

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| --- | --- | --- |
| Test case | Opcode | parameters |
| test\_RDGN | 0x87 | Node number, service index number and diagnostic number MaxDiagnostic + 1 |