



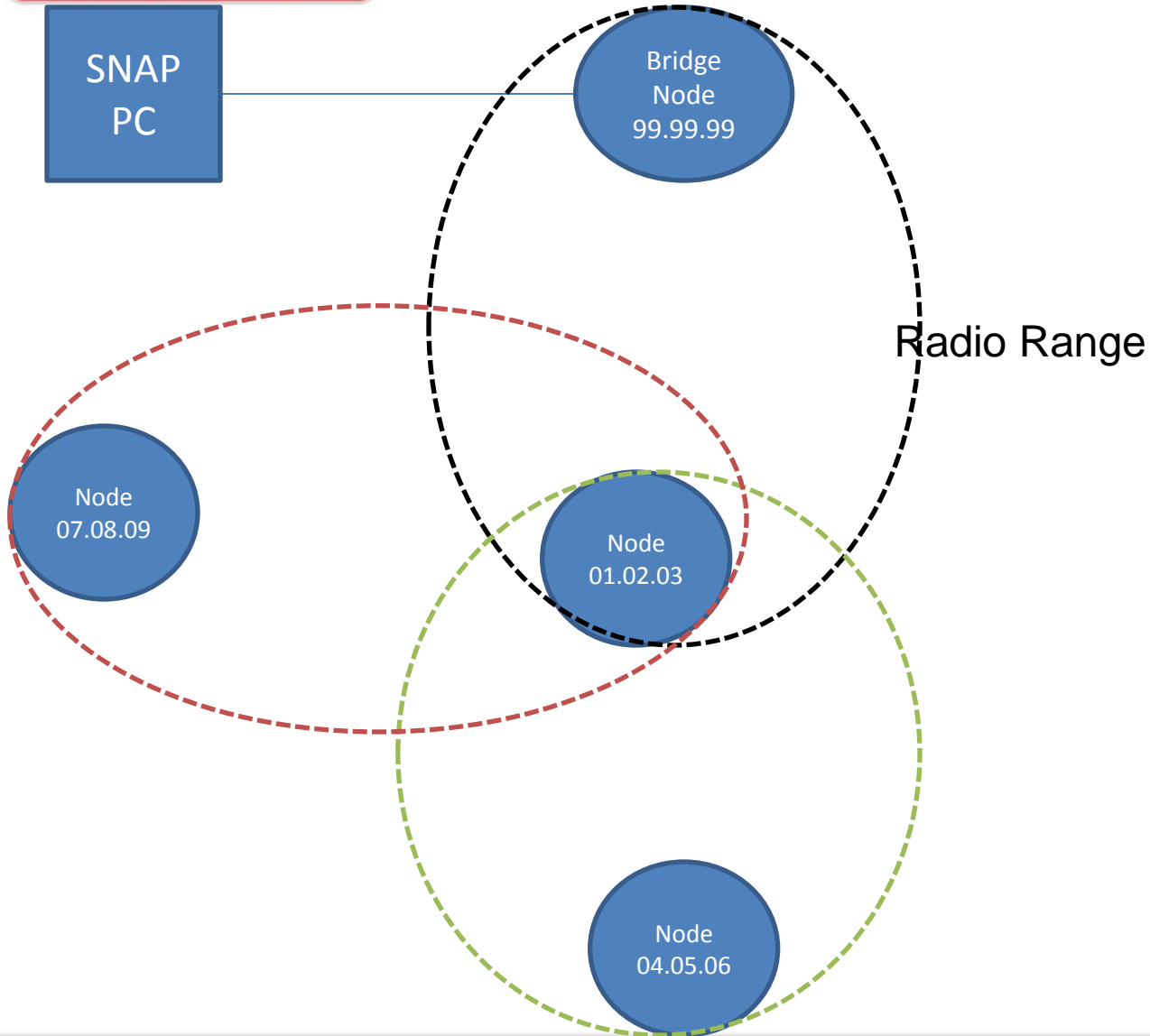
Wireless Technology to Control and Monitor Anything from Anywhere™

# SNAPpy Polling Framework

## Technical Overview



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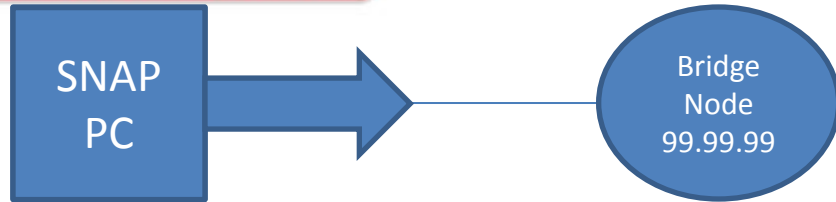


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# Node Discovery

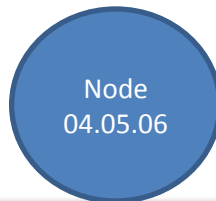
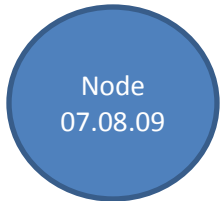


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**ping(sequence\_number)**

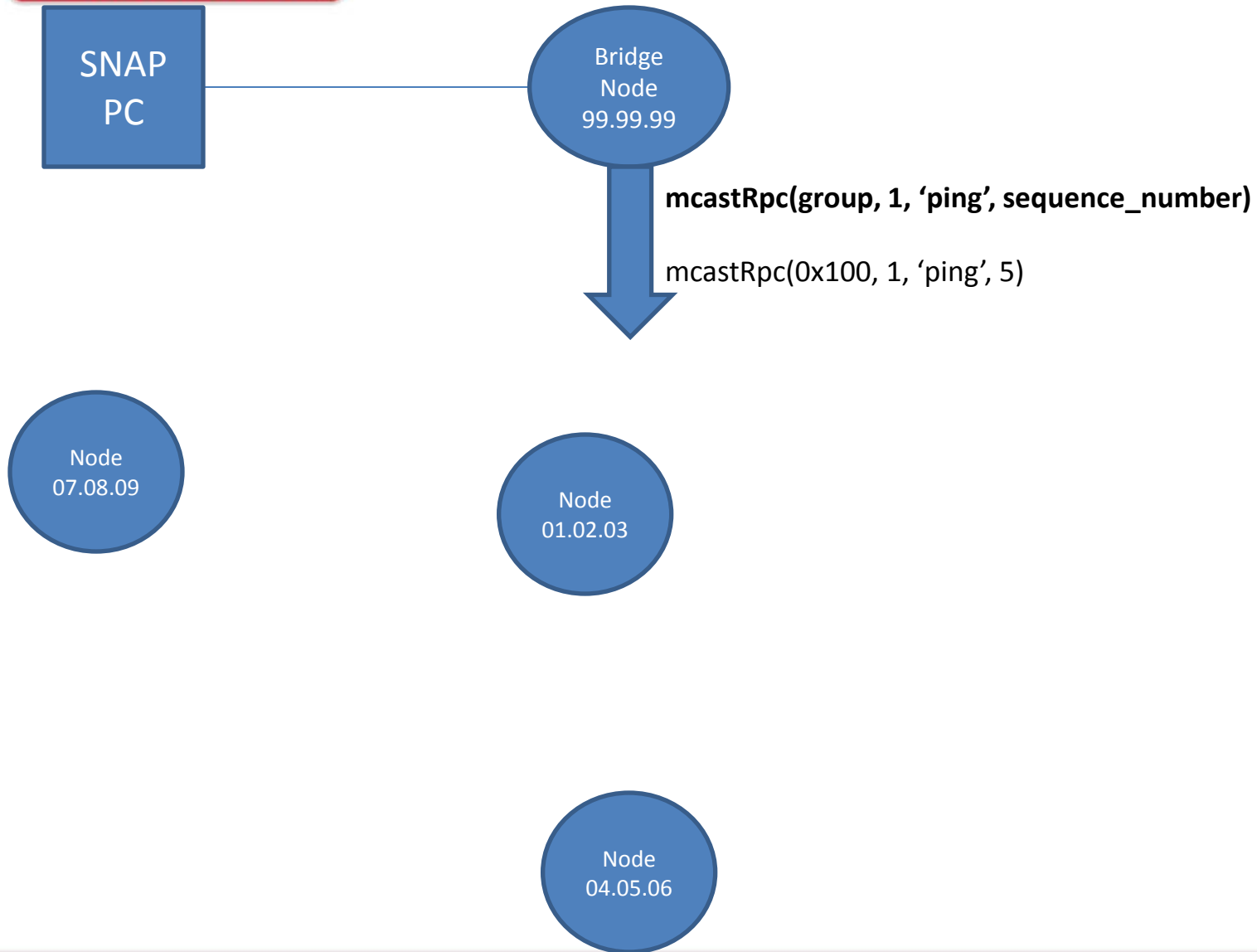
mcastRpc(0x100, 1, 'ping', 5)



Node Discovery



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Node Discovery



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SNAP  
PC

Bridge  
Node  
99.99.99

Node  
07.08.09

Node  
01.02.03

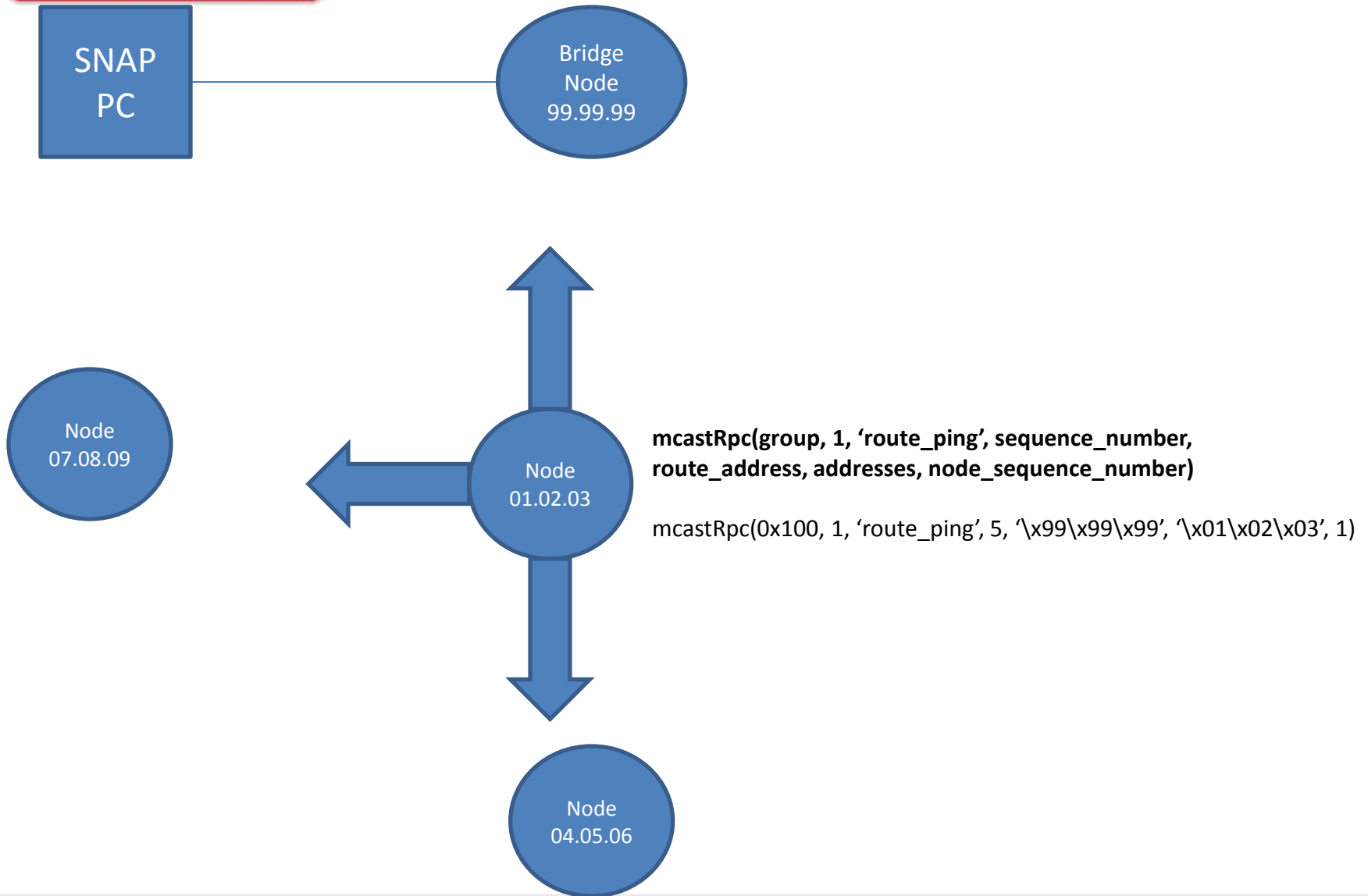
**100ms tick**

Node  
04.05.06

Node Discovery



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Node Discovery



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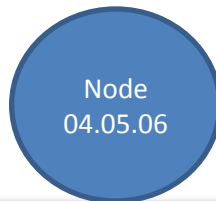
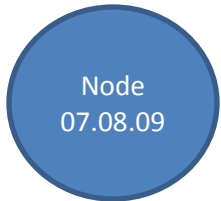
Bridge  
Node  
99.99.99

`mcastRpc(group, 1, 'tell_ping', sequence_number, addresses)`

`mcastRpc(0x100, 1, 'tell_ping', 5, '\x01\x02\x03')`

`mcastRpc(group, 1, 'rpA', sequence_number,  
address, node_sequence_number)`

`mcastRpc(0x100, 1, 'rpA', 5, '\x01\x02\x03', 1)`



Node Discovery





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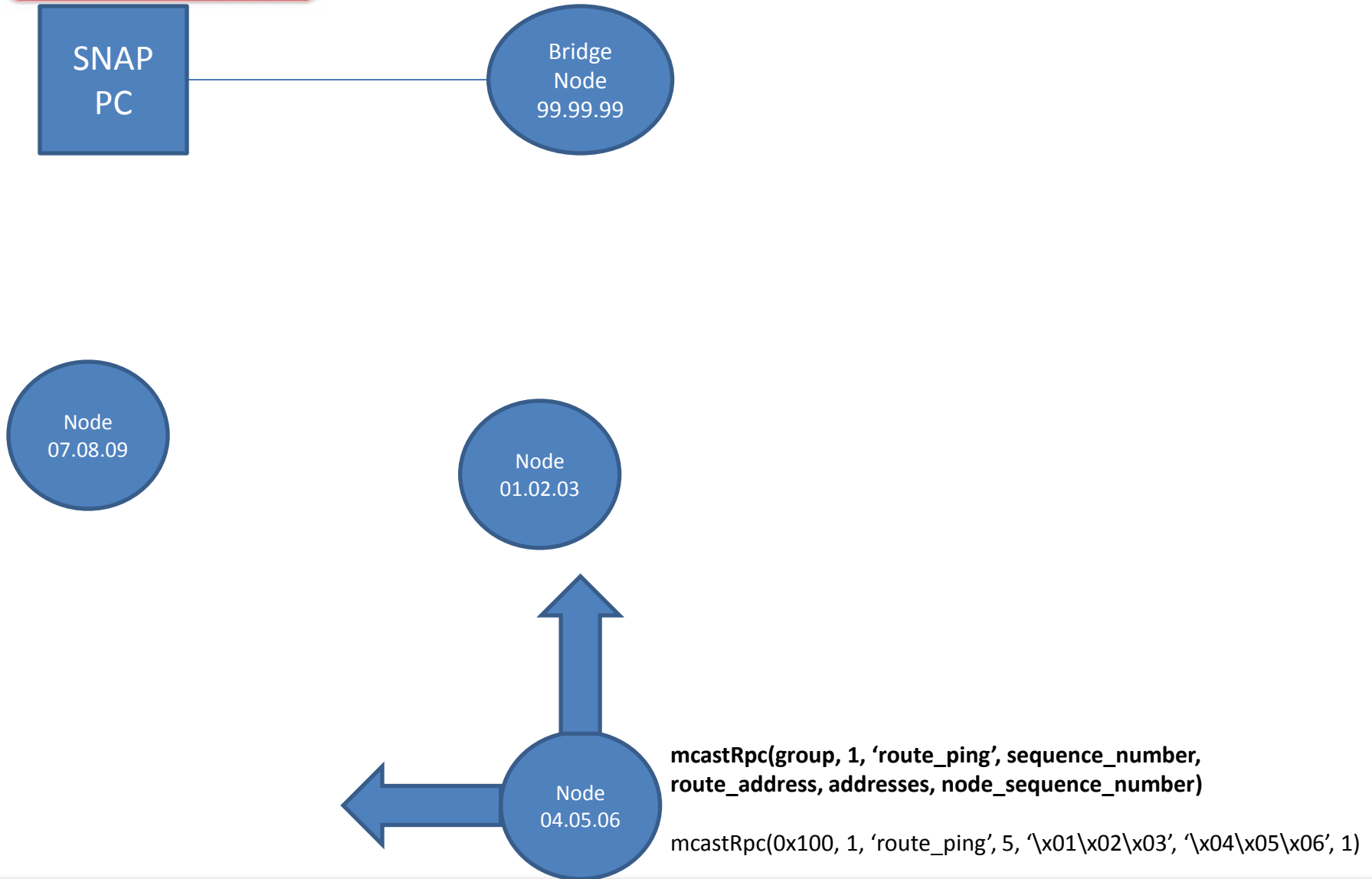
Node  
04.05.06

**100ms tick**

Node Discovery



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Node Discovery



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Node  
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Node  
07.08.09

Node  
01.02.03

**mcastRpc(group, 1, 'rpA', sequence\_number,  
address, node\_sequence\_number)**

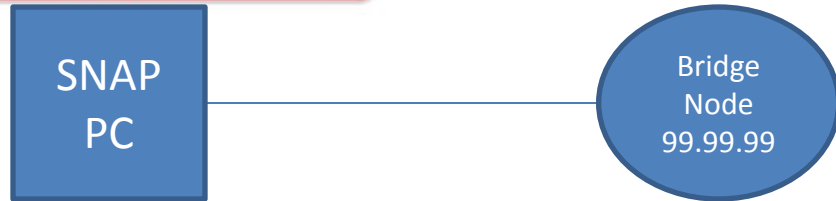
mcastRpc(0x100, 1, 'rpA', 5, '\x04\x05\x06', 1)

Node  
04.05.06

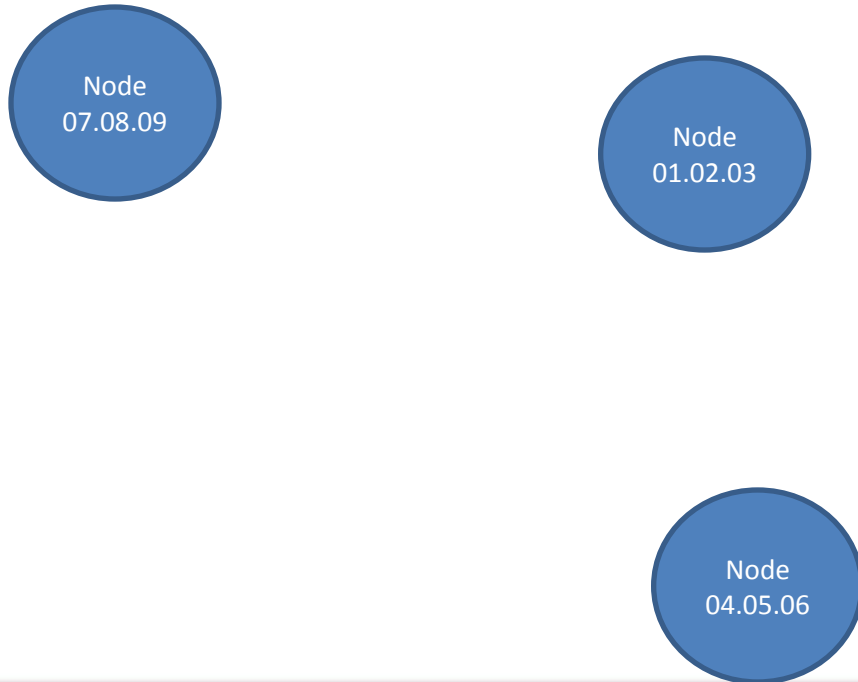
Node Discovery



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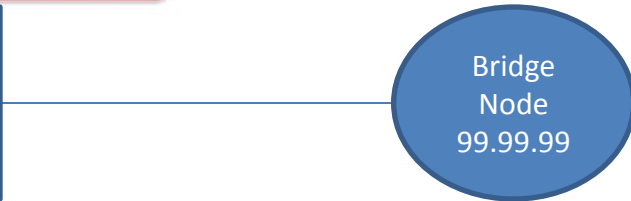
# 100ms tick



Node Discovery

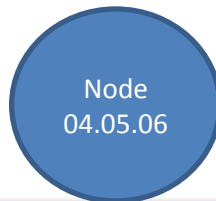


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**mcastRpc(group, 1, 'route\_ping', sequence\_number,  
route\_address, addresses, node\_sequence\_number)**

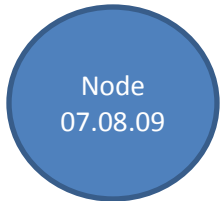
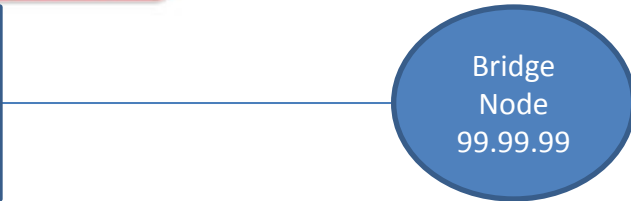
mcastRpc(0x100, 1, 'route\_ping', 5, '\x01\x02\x03', '\x07\x08\x09', 1)



Node Discovery

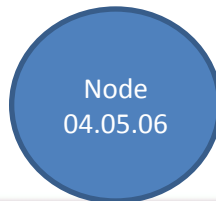


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**mcastRpc(group, 1, 'rpA', sequence\_number,  
address, node\_sequence\_number)**

mcastRpc(0x100, 1, 'rpA', 5, '\x07\x08\x09', 1)





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PC

Bridge  
Node  
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Node  
07.08.09

Node  
01.02.03

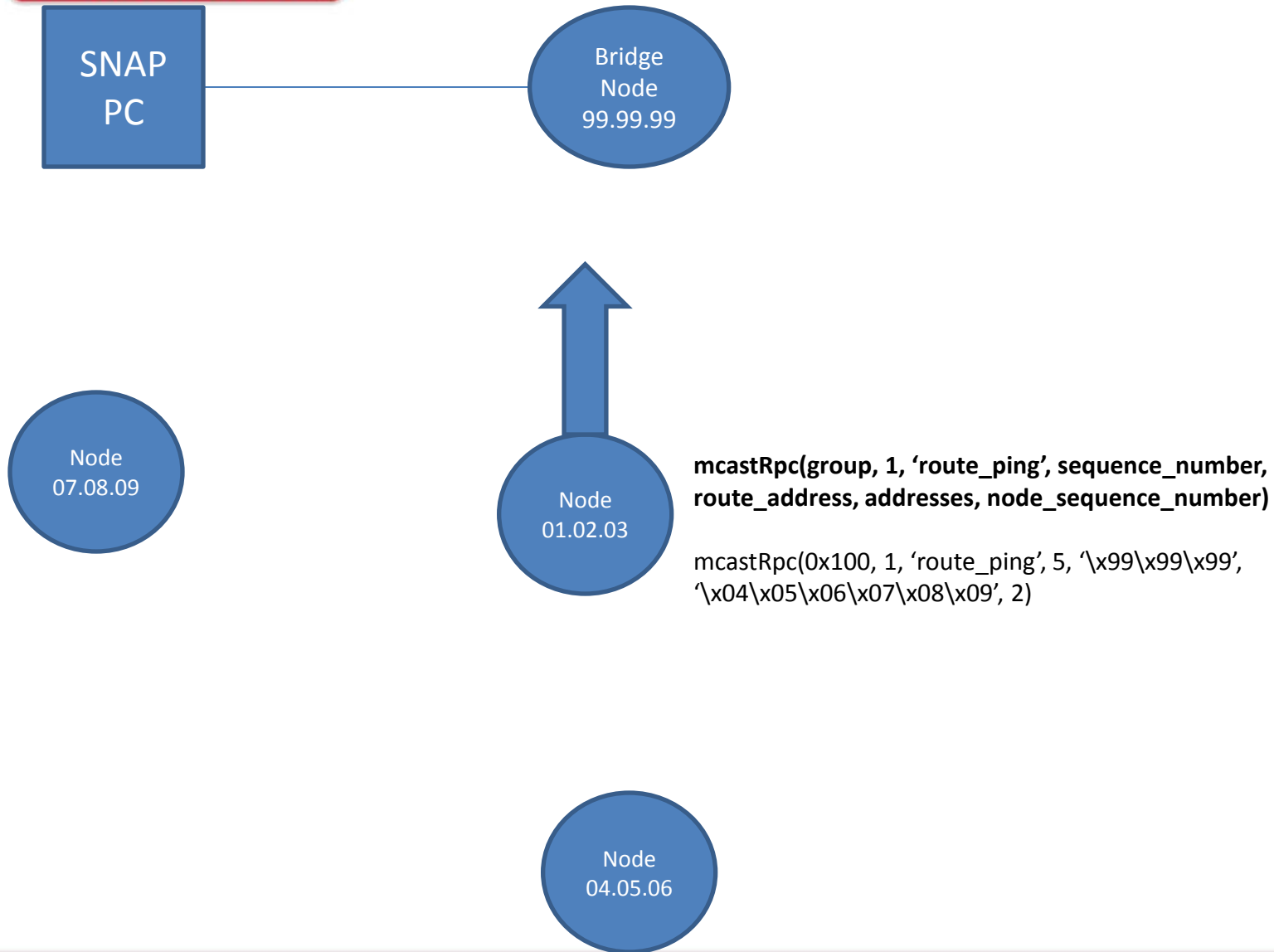
**100ms tick**

Node  
04.05.06

Node Discovery



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Node Discovery





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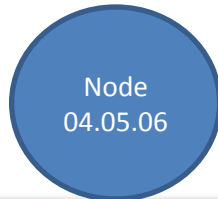
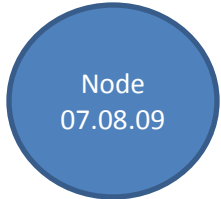
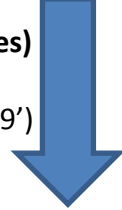


`mcastRpc(group, 1, 'tell_ping', sequence_number, addresses)`

`mcastRpc(0x100, 1, 'tell_ping', 5, '\x04\x05\x06\x07\x08\x09')`

`mcastRpc(group, 1, 'rpA', sequence_number, address, node_sequence_number)`

`mcastRpc(0x100, 1, 'rpA', 5, '\x01\x02\x03', 2)`



Node Discovery

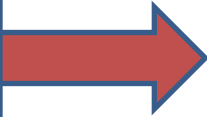
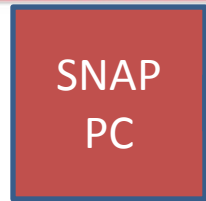


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# Data Retrieval

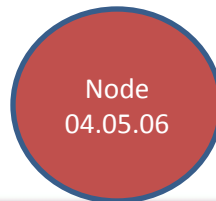
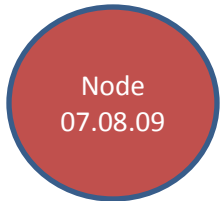


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**get\_data(sequence\_number, address, function\_name)**

mcastRpc(0x100, 1, 'get\_data', 6, '\x04\x05\x06', 'random')



Data Retrieval



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**get\_data(sequence\_number, address, function\_name)**

mcastRpc(0x100, 1, 'get\_data', 6, '\x04\x05\x06', 'random')

Node  
07.08.09

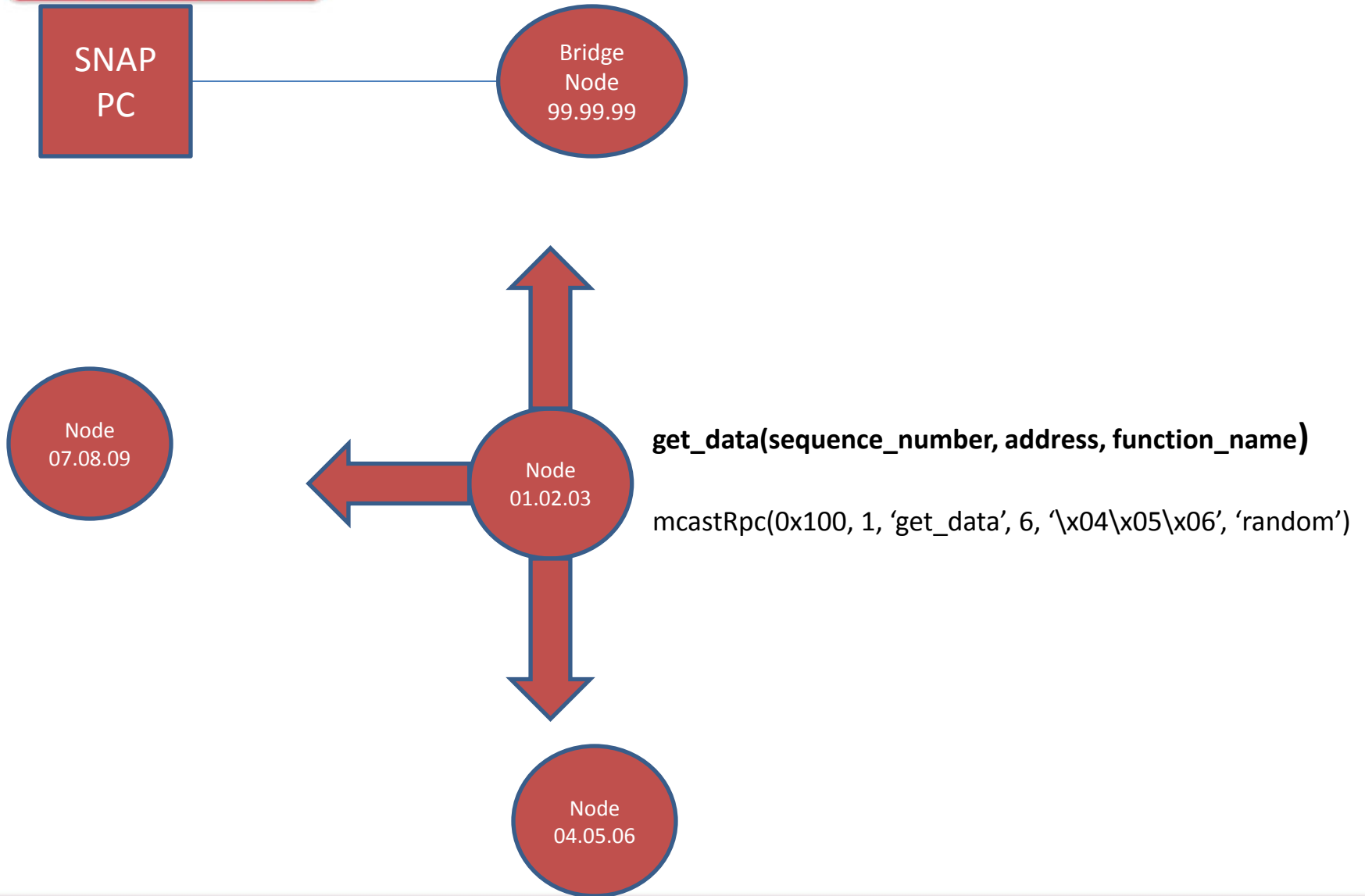
Node  
01.02.03

Node  
04.05.06

Data Retrieval



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Data Retrieval



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SNAP  
PC

Bridge  
Node  
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Node  
07.08.09

Node  
01.02.03

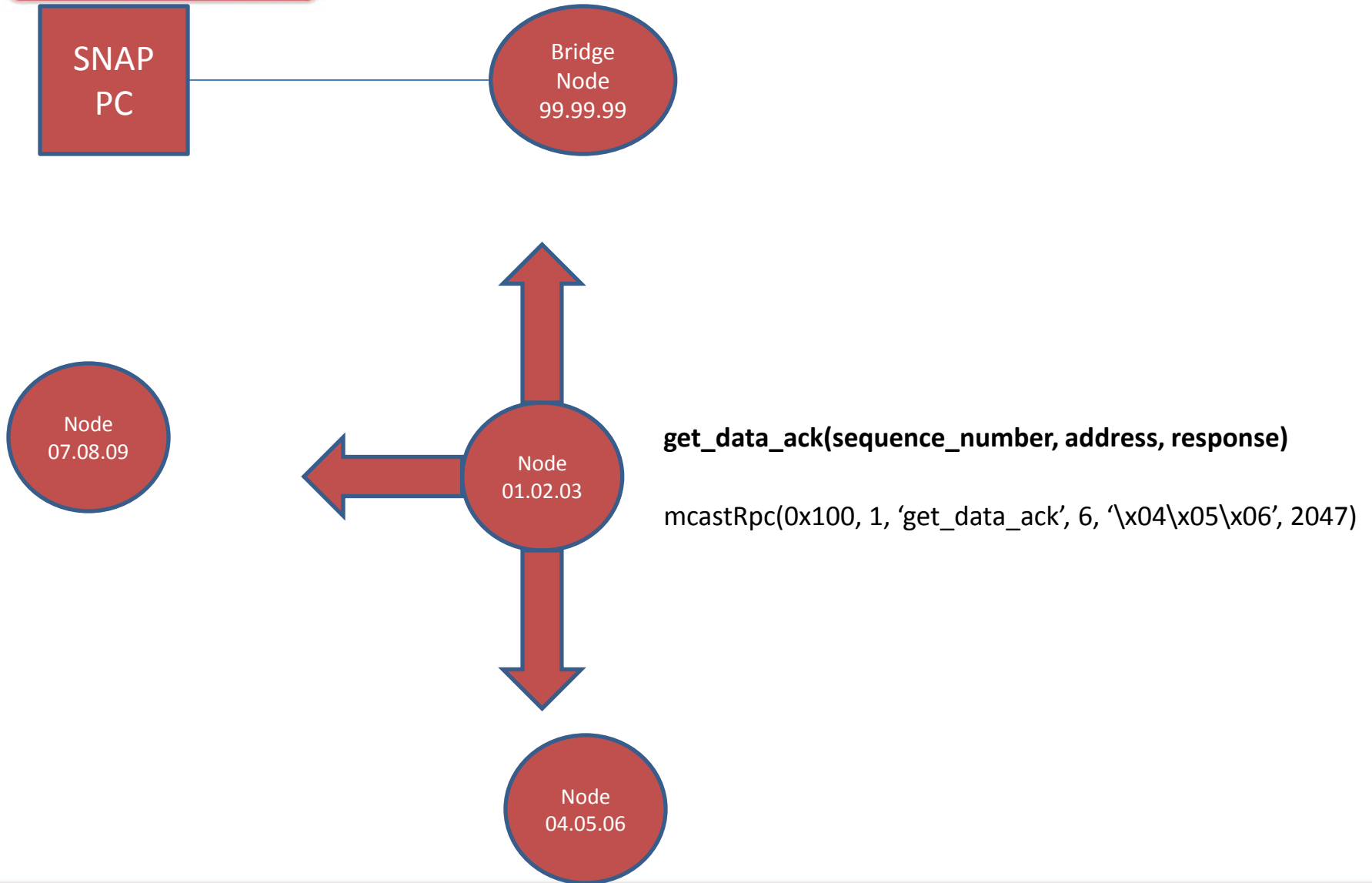
**get\_data\_ack(sequence\_number, address, response)**  
`mcastRpc(0x100, 1, 'get_data_ack', 6, '\x04\x05\x06', 2047)`

Node  
04.05.06

Data Retrieval



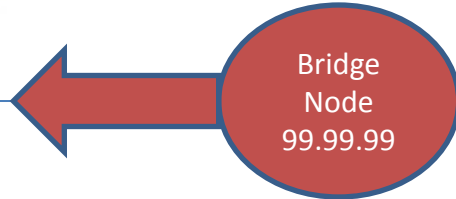
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Data Retrieval

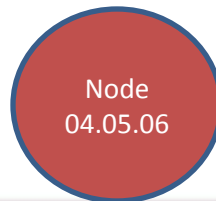
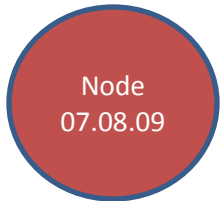


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**get\_data\_result(sequence\_number, address, response)**

`rpc('\x00\x00\x0b', 'get_data_result', 6, '\x04\x05\x06', 2047)`



Data Retrieval





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# SNAPpy Polling Framework

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