1. Each 0 or 1 in virtual machine memory page represents a block of 64 bytes, so a page of 4096 bytes will have 64 blocks.
2. if 0, it means all bits in this 64 bytes block is zero
3. if 1, it means there's at least a bit of 1 in this block.

1. Zero block checking from start of page

2. Zero block checking from end of page

7.Set the start of page to zero

8. Set the end of page to zero

Start Position

End Position

End Position

Start Position

3. Copy the start and end position data to page meta-data

9. Copy data from socket to page

4. Copy page data to socket buffer

5. Buffer Data transferred over network

6.Read Page Meta-data from buffer

0 0 0 0 1 1 ...... 0 0 1 0 0 0

1 0 0 0 1 1 ...... 0 0 1 0 0 0

0 0 0 0 1 1 ...... 0 0 1 0 0 0

1 0 0 0 1 1 ...... 0 0 1 0 0 0

Virtual Machine Page
Page Number=1001

Virtual Machine Page
Page Number=1002

Virtual Machine Page
Page Number=1001

Virtual Machine Page
Page Number=1002

Data Copy

Data Copy

Page Meta-data ... 0 1 0 1 1 1 ...... 0 0 1 1 0 0 0 1 1 ...... 0 0 0 1 1 0 1 0 0 ......

Page Meta-data ... 0 1 0 1 1 1 ...... 0 0 1 1 0 0 0 1 1 ...... 0 0 0 1 1 0 1 0 0 ......

Socket Sending Buffer

Socket Receiving Buffer

VMotion Source ESXi Host

VMotion Destination ESXi Host