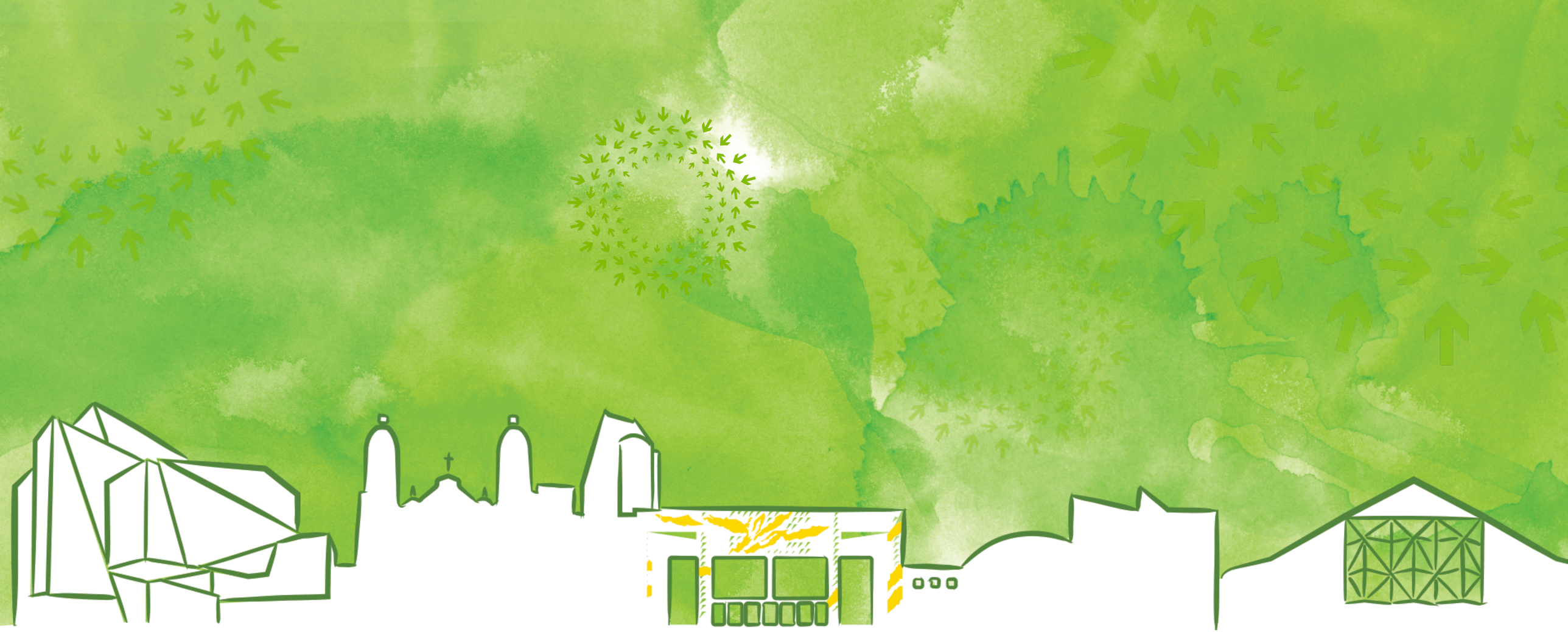

OCP Engineering Workshop 25 September 2017| Dallas, TX

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Connector Discussion

Paul Kappler
Network Hardware Engineer

Possible Bi – Furcation Use cases

Host Use Cases

1x16 Single Host

1x16 Single Host w/Bi-Furcation

Quad Host
x4 Each

Quad Host
x8 Each

Dual Host
x16 Each

NIC Use Cases

x16 Standard NIC
No Multi Host Capability

x16 Standard NIC
With Multi-Host Option
1 x16 or 2 x8

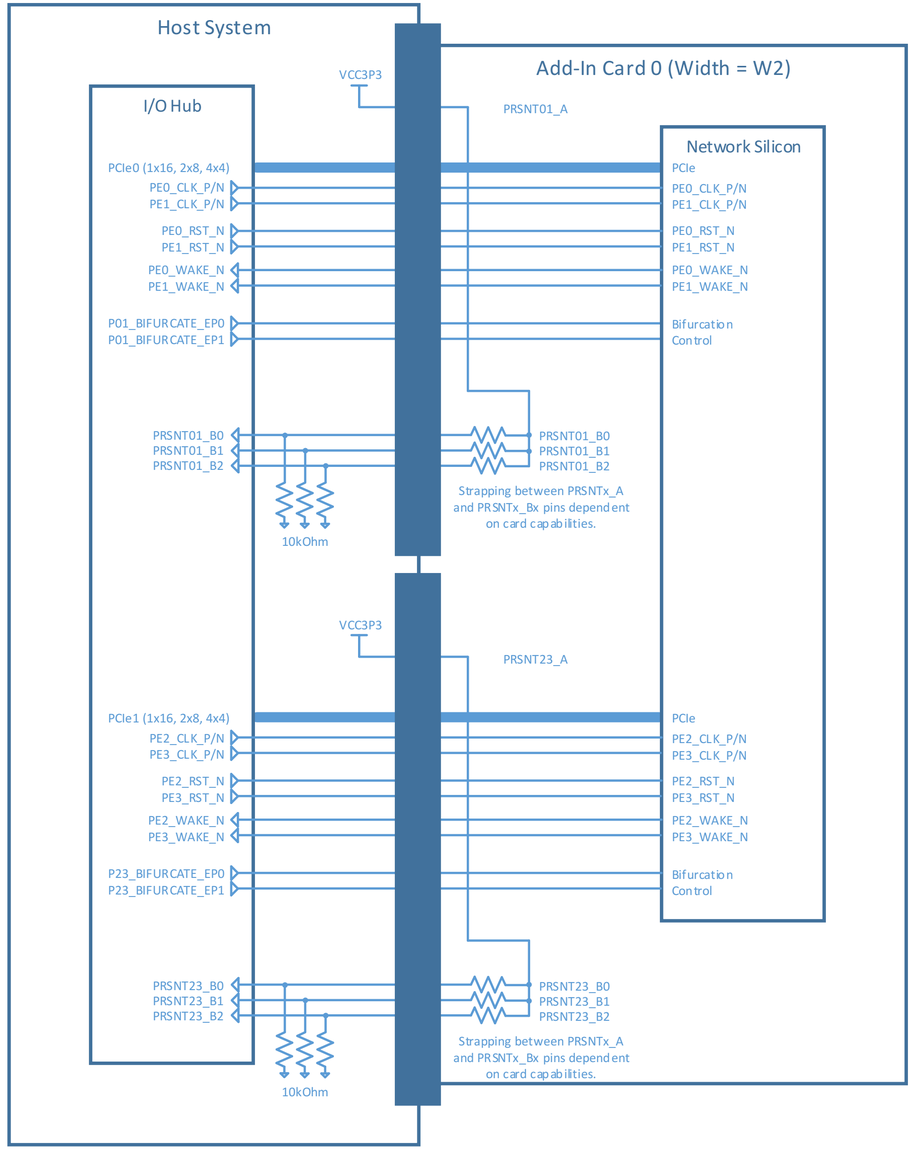
x16 Standard NIC
With Multi-Host Option
1 x16 or 2 x8 or 4x4

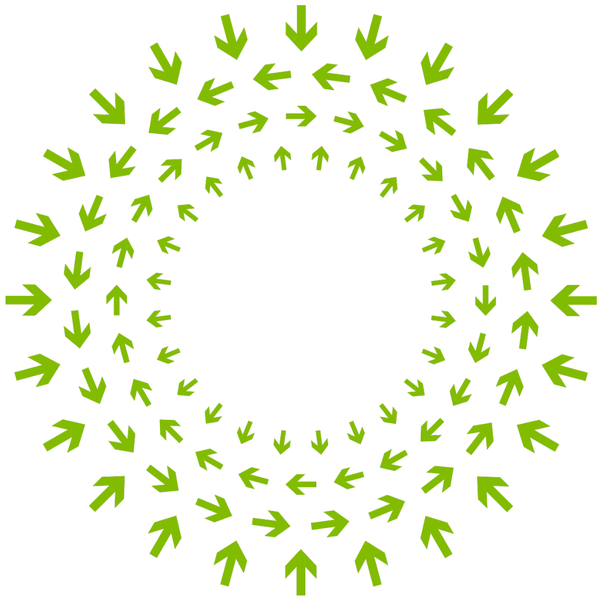
2 x16 Smart NIC
With Multi-Host Option
2 x16 or 4 x8

2 x16 Smart NIC
With Multi-Host Option
8 x4 or 4 x8

Proposed Bi-Furcation Scheme

		Connector 0 & 1 (x16 option)			
Network Card - Supported PCIe Configurations		**1 Host w/Bifurcation**	**2 Hosts**	**1 Host no bifuracton**	**4 Hosts**
	System Bifurcation Setting -->	1 x16 or 2 x8 or 4x4	2 x8	1 x16 or 1 x8 or 1x4	4 x4
	System Encoding -->	0b00	0b01	0b10	0b11
	Add-in-Card Encoding				
Card Not Present	0b000	-	-	-	-
Network Controller 1 x16 or 1 x8 or 1x4 or 1 Single 1 x16 EP that can reduce to x8	0b001	1 x16	1 x8 1 Host only	1 x16	1 x4 1 Host only
Network Controller 1 x16 or 2 x8 Single 1x16 NIC that can bifurcate to 2 x8	0b010	1 x16	2 x8	1 x16	2x4 2 Hosts Only
Network Controller 2 x8 only Two 2 x8 Endpoints	0b011	2 x8	2 x8	1 x8 1 Endpoint	2x4 2 Hosts Only
Network Controller 4 x4 only Four 4 x4 endpoints	0b100	4 x4	2x4	2x4	4 x4
Network Controller 1 x16, 2 x8, or 4 x4	0b101	1 x16	2 x8	1 x16	4 x4
RSVD	0b110				
RSVD	0b111				





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Compute Project