



Christopher Cox - NOAA Affiliate <christopher.j.cox@noaa.gov>

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## Fwd: Networking onboard Polarstern for MOSAiC

4 messages

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**Matthew Shupe - NOAA Affiliate** <matthew.shupe@noaa.gov>

Fri, Jul 5, 2019 at 11:19 AM

To: Matthew Bartee - NOAA Affiliate <matthew.bartee@noaa.gov>, Christopher Cox - NOAA Affiliate <christopher.j.cox@noaa.gov>, Daniel Gottas <Daniel.Gottas@noaa.gov>, Dave Costa <Dave.Costa@noaa.gov>

All, Here are the full responses from the Polarstern network people. Any comments or feedback. It seems to me that this will be workable. Cheers, Matt

----- Forwarded message -----

From: **Peter Gerchow** <Peter.Gerchow@awi.de>

Date: Thu, Jul 4, 2019 at 8:37 AM

Subject: AW: Networking onboard Polarstern for MOSAiC

To: [matthew.shupe@noaa.gov](mailto:matthew.shupe@noaa.gov) <[matthew.shupe@noaa.gov](mailto:matthew.shupe@noaa.gov)>

Cc: Antonia Immerz <[Antonia.Immerz@awi.de](mailto:Antonia.Immerz@awi.de)>, Jens-Michael Schlüter <[Jens-Michael.Schlueter@awi.de](mailto:Jens-Michael.Schlueter@awi.de)>

Hi Matthew,

we discussed your requirements in detail today. Sorry for the late response. I stayed on board of Polarstern of the last expedition. Please find my answers below your text:

1) How do you assign the VLAN ip address block? Do you already have a block designated for our project? Can you provide me with the subnet and/or ip block range that we can use? It would greatly help us to configure our systems and test them now using the ip addresses they will have in the field.

A: We defined a VLAN 190 with an IP-Range [192.168.202.0/24](#). for your an the Blomquist devices you can use 192.168.202.1 until 192.168.202.248. The gateway to the ship network is 192.168.202.254. The addresses upon 192.168.202.248 are preserve for ship network devices. Please feel free to define the IP-addresses for your devices as static or by your own dhcp-server.

2) I assume that our team will have exclusive use of our assigned sub-net and/or ip address block?

A: Yes. The range is only for your team.

3) We will have some devices that connect via the WiFi. Is there a way for WiFi devices to connect to our assigned VLAN? How will that process be accomplished?

A: Yes. The WiFi-Network on the ice field (subnet [192.168.3.0/24](#)) is routed as part of the ship network and to your subnet [192.168.202.0/24](#). The onboard WiFi follows the same procedure. Sorry I don't know the subnet-IP now.

4) What will the network's security credentials be like?

A: There are no security credentials on the network. If you want to store your data on the mcs-filesystem only MOSAiC-user has access.

5) Is there any sort of "time out" on logins or connections to the network?

A: No timeout.

6) We would like to request access to ports 3389, 21, and 22. Is there any problem with that?

A: All ports are available onboard and over subnets too.

I hope I could answer all your question...

Cheers

Peter

Thank you for your answers to these questions. I'm sure everyone is working hard to get everything ready and I really appreciate the hard work your team is doing to deal with this critical network infrastructure.

Cheers, Matthew

On Tue, Apr 9, 2019 at 4:43 AM Peter Gerchow <[Peter.Gerchow@awi.de](mailto:Peter.Gerchow@awi.de)> wrote:

Hi Matthew,

thanks for your request. We can provide a VLAN and sub-net for your team on the ship and in the "cities".

Regards,

Peter

**Von:** Matthew Shupe - NOAA Affiliate <[matthew.shupe@noaa.gov](mailto:matthew.shupe@noaa.gov)>

**Gesendet:** Freitag, 5. April 2019 22:47

**An:** Peter Gerchow <[Peter.Gerchow@awi.de](mailto:Peter.Gerchow@awi.de)>; Antonia Immerz <[Antonia.Immerz@awi.de](mailto:Antonia.Immerz@awi.de)>

**Betreff:** Networking onboard Polarstern for MOSAiC

Peter, Antonia,

As is likely the case for a couple other groups, my group will have many instruments/components installed across the MOSAiC system that will need to be connected to a network. The challenge is that we will have components on the ship, in the ice camp, and in the distributed network, all of which will need to be networked. Thus, I'm trying to get a better understanding of how we can accommodate the networking needs. One way is that we could establish a number of private local networks that are behind gateways. For a number of reasons, this approach would be less than ideal.

The best approach that we see is if we can have a dedicated sub-net? Is that possible? This approach would readily allow us to communicate across our many different components in different physical locations on the broader Polarstern network space and minimize issues related to IP space conflict. I guess the alternative to this would be for us to get a large collection (~30) of static IP addresses. The challenge on that side would be the need to involve someone from your team every time we wanted to modify a system on the network.

Please advise on what will be possible for us. Thanks much, Matthew

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**Christopher Cox - NOAA Affiliate** <christopher.j.cox@noaa.gov>  
To: Michael Gallagher <michael.ray.gallagher@gmail.com>  
Cc: Matthew Shupe - NOAA Affiliate <Matthew.Shupe@noaa.gov>

Mon, Jul 15, 2019 at 1:32 PM

Michael,

Below is the email from AWI about the ship network, FYI.

These are your IP addresses (AWI gateway = 192.168.202.254):

ASFS 30 mango 192.168.202.31  
ASFS 30 camera 192.168.202.32  
ASFS 40 mango 192.168.202.41  
ASFS 40 camera 192.168.202.42  
ASFS 50 mango 192.168.202.51  
ASFS 50 camera 192.168.202.52  
Tower Camera 192.168.202.9

-Chris

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Christopher J. Cox  
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**Christopher Cox - NOAA Affiliate** <christopher.j.cox@noaa.gov>

Mon, Jul 15, 2019 at 1:37 PM

To: Byron Blomquist - NOAA Affiliate <byron.blomquist@noaa.gov>, Maximilian Maahn - NOAA Affiliate <maximilian.maahn@noaa.gov>

Cc: Matthew Shupe - NOAA Affiliate <Matthew.Shupe@noaa.gov>

Byron and Max (cc Matt),

See below information from AWI on the network at mosaic. The CU teams will share the 192.168.202.xxx subnet which will be a VLAN. The gateway is 192.168.202.254 and addresses 248-254 are taken by AWI. I have assigned addresses between 192.168.202.1 and 192.168.202.59. So, whatever computers you need to have on this subnet, please coordinate use of addresses 192.168.202.60 to 192.168.202.247. Dan has the tower on two isolated NICs, so the O3 and Picarro will be on 192.168.1 or 2 subnet as was tested in the lab.

Is there anyone else besides Byron, Max and Michael (separate email) who we need to coordinate with?

-Chris

----- Forwarded message -----

From: **Matthew Shupe - NOAA Affiliate** <matthew.shupe@noaa.gov>

Date: Fri, Jul 5, 2019 at 11:19 AM

Subject: Fwd: Networking onboard Polarstern for MOSAiC

To: Matthew Barteo - NOAA Affiliate <matthew.barteo@noaa.gov>, Christopher Cox - NOAA Affiliate <christopher.j.cox@noaa.gov>, Daniel Gottas <Daniel.Gottas@noaa.gov>, Dave Costa <Dave.Costa@noaa.gov>

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**Maximilian Maahn - NOAA Affiliate** <maximilian.maahn@noaa.gov>

Mon, Jul 15, 2019 at 4:56 PM

To: Christopher Cox - NOAA Affiliate <christopher.j.cox@noaa.gov>

Great, I will use 192.168.202.61 and 192.168.202.62

Thanks, Max

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