Subject: Re: SOAR database?
Date: Tuesday, September 27, 2022 at 8:53:15 AM Eastern Daylight Time
From: Omar Estay <omar.estay@noirlab.edu>
To: Stephen Hope <stephen.hope@idg.jhu.edu>, Massimo Robberto <robberto@stsci.edu>
Attachments: image001.png

Hi Stephen, Massimo,

I'm sorry, but in order to connect to the control system (TCS) you must be in the SOAR network.

And another question, Who are you working with to control SAMI from SAMOS?, because you need someone to work on the SAMI side.

Cheers,
Omar

On Mon, Sep 26, 2022 at 4:45 PM Stephen Hope <stephen.hope@idg.jhu.edu> wrote:

> Hi Omar,
>
> Good question… At this point in time our instrument control computer is located at JHU in Baltimore. Eventually, I believe the plan is that it will reside at SOAR with the instrument.
>
> As I am sure you are aware, SAMOS will be making use of the SAMI camera in addition to its own camera. Massimo is developing the control software for SAMOS. I believe the goal is to integrate control of SAMI into our system by commanding SAMI remotely via the SOAR SCLN. The immediate need (using our public IP) would be to establish comms via SCLN for the purpose of developing the code to control SAMI. Of course, once the instrument is at SAOR, it will have a SAOR assigned IP – presumably on the SOAR instrument LAN.
>
> Best Regards,
>
> Steve
>
> ---
>
> **From:** Omar Estay <omar.estay@noirlab.edu>
> **Sent:** Monday, September 26, 2022 3:16 PM
> **To:** Stephen Hope <stephen.hope@idg.jhu.edu>
> **Cc:** Massimo Robberto <robberto@stsci.edu>
> **Subject:** Re: SOAR database?

Hi Stephen,

I have a question, is your machine within the SOAR network?

Regards,

Omar

On Mon, Sep 26, 2022 at 4:09 PM Stephen Hope <stephen.hope@idg.jhu.edu> wrote:

> Hi Omar,
>
> We have an edge router for our LAN. We have 8 public IP addresses mapped to a single WAN port. That said, I am pretty sure that all outbound traffic (initiated from our LAN) will be sent using the primary WAN address -- 128.220.146.213.
>
> Best Regards,
>
> Steve Hope
>
> ---
>
> **From:** Omar Estay <omar.estay@noirlab.edu>
> **Sent:** Monday, September 26, 2022 3:02 PM
> **To:** Massimo Robberto <robberto@stsci.edu>
> **Cc:** Stephen Hope <stephen.hope@idg.jhu.edu>
> **Subject:** Re: SOAR database?
>
> Hi Massimo,
>
> I only need the IP address, the port is defined by TCS.
>
> Cheers,
>
> Omar
>
> On Mon, Sep 26, 2022 at 3:56 PM Massimo Robberto <robberto@stsci.edu> wrote:

hi Omar

Steve Hope is going to provide the IP address/port.

At the moment we talk to the instrument connecting through VPN with our JHU server.

We may revisit this once the instrument is on the mountain.

Cheers

Massimo

From: Omar Estay <omar.estay@noirlab.edu>
Date: Monday, September 26, 2022 at 8:44 AM
To: Massimo Robberto <robberto@stsci.edu>
Subject: Re: SOAR database?

External Email - Use Caution

Massimo,

Sorry for the delay, I was on vacation.

I am going to create a server for SAMOS, but I need your IP number to validate it on the TCS side, after that I will give you the IP and port.

Regards,

Omar

On Fri, Sep 16, 2022 at 6:14 PM Massimo Robberto <robberto@stsci.edu> wrote:

> Dear Omar
>
> Thank you for your message and apologies for being late with this answer.
>
> I will look in detail to the commands and almost certainly will have a few questions for you.
>
> In terms of communicating with SOAR, we may be not that far from what we need. I am attaching a screen capture

of my configuration page, under development. We communicate to our SAMOS subsystems through TCP/IP,

so if this is also a way to connect to SOAR, we just need an address and port. In what concerns the message

protocol, the shortest path could be to get a demo message including the 4 characters at the top, so we can recover the

correct endianness (I think that's the right word) of the code.

You will notice from the screen shot that we have left room, nothing more at the moment, for controlling also SAMI.

We use SAMI as our spectroscopic detector. Our plan, however, is to keep things simple initially and therefore use

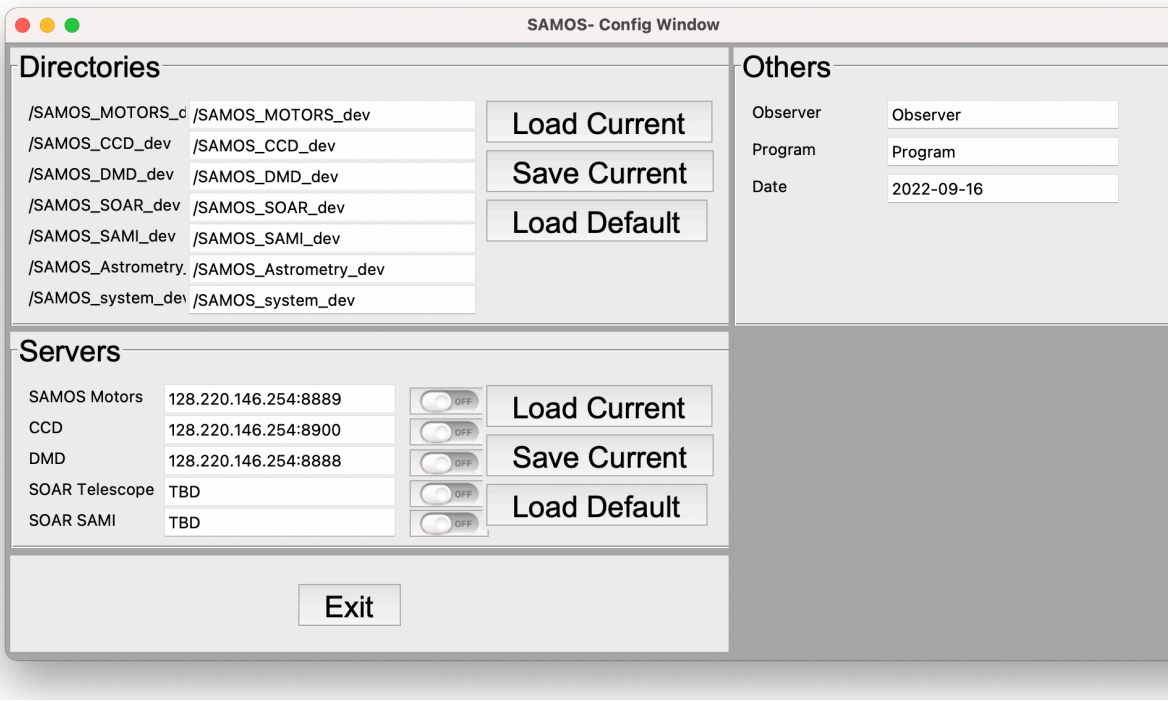
SAMI as an external system, i.e. someone will sit at the SAMI workstation and set/start the exposures from there

while we control the rest from the SAMOS workstation. Still, if you have advice/instructions for controlling

SAMI via TCP/IP, that would be nice to have.

Thank you again

Massimo



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Dr. Massimo Robberto

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From: Omar Estay <omar.estay@noirlab.edu>
Date: Thursday, September 8, 2022 at 11:28 AM
To: Massimo Robberto <robberto@stsci.edu>
Subject: Re: SOAR database?

External Email - Use Caution

Massimo,

In SOAR to communicate between applications we use SOAR Communications Library New (SCLN). In the same way the instruments must use their protocol to connect to the control system, where the SCLN transports messages between clients and servers, by preceding each message with 4 bytes indicating the length of the message. For non LabVIEW applications it's necessary to extract those 4 bytes when receiving a message and to insert 4 bytes when sending a message. Care must be taken though, because even though the 4 bytes represent an integer number of characters corresponding to the message length, those bytes are rotated due to the way LabVIEW "casts" integers to strings and vice versa.

Our applications are developed in LabView, and the SOAR Communications Library New (SCLN) provides a set of LabVIEW VIs for implementing TCP/IP connections in a client-server applications environment.

When you want to connect to SOAR to get information, because I have to create a server to respond to SAMOS?

Attached version of updated commands.

Regards,

Omar

On Wed, Sep 7, 2022 at 8:56 PM Massimo Robberto <robberto@stsci.edu> wrote:

> Dear Omar,
>
> Communicating through TCP/IP is actually ideal. We already talk to our HW (filter wheels, imaging CCD and DMD) through TCP/IP sockets.
>
> At the moment the only information I managed to get is the attached file, that being dated 2004 is probably obsolete.
>
> Thank you!
>
> Massimo
>
> ==========
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From: Omar Estay <omar.estay@noirlab.edu>
Date: Wednesday, September 7, 2022 at 8:59 AM
To: Andrei Tokovinin <andrei.tokovinin@noirlab.edu>
Cc: Massimo Robberto <robberto@stsci.edu>
Subject: Re: SOAR database?

External Email - Use Caution

Hello Massimo,

If I am correct, you need information to fill in the headers of images taken by an instrument (SAMOS), similar to what SAMI does.

In this case, the heads have their own instrument information and information obtained from the TCS (Telescope control system), therefore, the instrument must be connected to the TCS and obtain the information through a set of commands.

At this moment, Is the instrument installed in the SOAR network? The communication is through a TCP/IP socket, I can send you the protocol and the set of commands.

Regards,

Omar

On Tue, Sep 6, 2022 at 6:40 PM Andrei Tokovinin <andrei.tokovinin@noirlab.edu> wrote:

> Massimo,

If the document exists on how to connect to the SOAR TCS data for filling the FITS headers,\, Omar Estay (copied) should know how to find it.

On Tue, Sep 6, 2022 at 6:20 PM Massimo Robberto <robberto@stsci.edu> wrote:

> Hi Andrei
>
> Hope this e-mail finds you well.
>
> We are finally emerging from the JWST commissioning. I will be on sabbatical all 2023 and I am starting
>
> to spend more time on the final touches of SAMOS.
>
> In particular, I am working with Dana on finalizing the fits headers of our files. I did notice the SAMI has
>
> FITS keywords with data that seem to be populated by a database hosted at SOAR. Is there
>
> a document that describes how a visitor instrument could pull data out from that database?
>
> Thank you
>
> Massimo

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