# 2021-11-15 DM-SST Agenda and Meeting notes

## Date & Time

15 Nov 2021  11:00 PDT

## Location

| Browser | Room System | Phone Dial-in |
|---|---|---|
| https://bluejeans.com/927260081 | 1. Dial: 199.48.152.152 or bjn.vc<br>2. Enter Meeting ID: 103664856 -or- use the pairing code | Dial-in numbers:<br>• +1 408 740 7256<br>• +1 888 240 2560 (US Toll Free)<br>• +1 408 317 9253 (Alternate Number)<br><br>Meeting ID: 927260081 |

## Attendees

- Leanne Guy
- Yusra AlSayyad
- Melissa Graham
- Colin Slater
- Hsin-Fang Chiang
- Zeljko Ivezic
- Simon Krughoff
- Eric Bellm
- Gregory Dubois-Felsmann
- Jeffrey Carlin
- Jim Bosch
- Keith Bechtol

### Regrets

- Robert Lupton

## Discussion items

| Item | Who | Pre-Meeting Notes | Notes and Action Items |
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| Project /Science Updates | Leanne Guy<br><br>Zeljko Ivezic | • Excellent talk from Eli at last week's PST meeting on calibration | • SCOC workshop on cadence this week<br>• Document written by Chuck, Leanne, Robert, Brian, etc on missing scope. Many entries relevant to DM/DM-SST<br>• Rubin-Euclid DDP report. Where/Who will be serving them?  Out of scope for this report, this is the next step. Rubin is not expected to produce/host/serve them as part of it's current scope. |

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| News from Broker Technical Workshop | Eric Bellm (on SOC) | • Meeting website<br>• No major reactions to Spencer's outline of Alert Distribution interfaces (auth, etc.)<br>• Brokers continue to be very unsure about practical limitations of access to data products through the Science Platform & it's clear this is hindering their planning<br>• Interest in bulk access to historical alerts (~tarballs) in addition to present DMTN-183 design<br>• Discussion among brokers about potentially using a shared alert archive<br>• Francisco Forster strongly arguing for larger cutouts–an interesting proposal to make them multi-resolution to keep the overall size (in bytes) similar. Followup experiments on ZTF confirm (moderate) improvement in image-based classification (slides). | • Spencer is getting alert distribution set up at IDF right now.<br>• Cutouts, access to PPDB. Eric pointed them to sizing model document but community still not sure how to plan.<br>  ◦ Access to alert archive has not been confronted yet<br>  ◦ Community concerned about volume limitations, 1, 10, more cutouts.<br>  ◦ Cloning the PPDB, dump of the diff?<br>  ◦ What is not working about the standard cutout service? Science platform was not designed for this. Careful about pushing the RSP into a role it was not designed for.<br>  ◦ Also supplemental queries to what is in the packet, cutouts larger than alerts,<br>  ◦ Should we give larger cutouts in the first place.<br>  ◦ Collect a list of issues ahead of time to think about our responses.<br>• Also uncertainty on our side.<br>• Spencer has a prototype for the alert archive, focus on small searches, pick out individual alerts.<br>• Alerce have a deep NN classifier on the ZTF stamps , variable, AGN, SN classification. FF concern is that the current cutout size prevents classification. Proposal is a hierarchical resolution - larger spatial area but same overall number of pixels.<br>  ◦ Is this the right approach?<br>  ◦ How do we represent the data?<br>  ◦ How do we decide the scale?<br>• Little concern from other brokers. Alerce is doing the most stamp processing.<br>• GPDF: No real concerns, good experiment.<br>• Are the coarser pixels for the central regions included? FF used annuli to avoid duplication and for size concerns.<br>• Can pack this into a FITS file but an image viewer will not recognize it as an image.<br>• Could also adopt a stricter lossy type compression. Most compression algorithms are not designed around small things.<br>• How much are they looking for in the template images vs difference images.<br>  ◦ Orig. pres is about host association template<br>  ◦ What about a low resolution as well?<br>  ◦ Could we have both options?<br>• Do brokers need to take everything? Can throw away what people want to keep. Indicated that we can remove some parts of the alerts, e.g remove the history and have just the Object /DIASource record. No team has committed to this yet.<br><br>☑ Eric Bellm organize an informal round-table with the brokers to understand their needs. 30 May 2022<br><br>☑ Eric Bellm will follow up on the topic of larger/multi-resolution cutouts with Francisco F and report back in ~ 4 months<br>31 Mar 2022 |
| Descoping the Alert Filtering Service | Eric Bellm | • Proposal to descope the alert filtering service<br>• strong ensemble of community brokers lessens the need for an on-project backstop service<br>• Required system has challenging implementation characteristics and only iffy performance<br>• DMTN-165 hybrid alert approach remains viable & interesting but hard to prioritize it over other work<br>• staffing challenges<br>• Requirements to strike:<br>  ◦ DMS-REQ-0348<br>  ◦ DMS-REQ-0343<br>  ◦ DMS-REQ-0342<br>  ◦ LSR-REQ-0025 is missing? flows down to DMS-REQ-0342<br>  ◦ LSR-REQ-0026 ? | • POC on AFS done, claimed the milestone but a lot of work to do to build it.<br>• Formally retire the risk on "no brokers"<br>• KSK: This was the only interface that promised RT access to the alert. No broker is under any requirement to turn around the alerts in any given time. AFS was for the<br>• EB: No latency requirement on the AFS, OTT1. We would aim to but we have no requirement.<br>• Brokers will be motivated to make the turnaround fast. We can follow up.<br>• AFS: Also only place where the whole DR community could put their filters.<br>• CS: latency could be backfilled with PPDB broadly addressing some use cases - can the latency be reduced. Significant implications for the architecture.<br>• AP would be better served focusing on algorithms and pipelines.<br>• GPDF: Want to be careful about descoping a promised service.<br>• ZI: put the filtering service into the SRD, there was not guarantee that any broker would be funded. If antares is the broker at the US national level, we could descope. Need some agreement btw NL, NSF, Rubin.<br><br>☑ Eric Bellm Leanne Guy to get together to discuss next steps for the AFS 07 Mar 2022 |

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| LCR for Three-stamp LCR Alerts | Eric Bellm | • LCR still being drafted, to combine with above descope<br>  ◦ change would be to DMS-REQ-0274<br>  ◦ (is an LCR required here? Additional contents don't violate the requirements...)<br>  ◦ Alert size is only specified in the DPDD | ☑ Eric Bellm Create RFC for three-stamp alerts, to communicate and garner feedback 31 Dec 2021 *RFC-904*<br>• Two-stamp approach is mentioned in change-controlled design documents (LDM-151 and LDM-612) in addition to the DPDD; these would need to be changed in any event. |
| Alert Distribution handover to Ops | Eric Bellm | • The alert distribution system is reaching maturity and we would like to consider handing over to ops. What do we need to demonstrate to deliver on the construction requirements? What can be passed to ops (eg P2/3 requirements).<br>  ◦ DMS-REQ-0002 (1b)<br>  ◦ DMS-REQ-0391 (2)<br>  ◦ DMS-REQ-0393 (2) ?<br>  ◦ DMS-REQ-0094 (1b) ?<br>• Planning for an acceptance test campaign. | • Prompt Processing system adjacent ot the AD system. Had nover one without handing over the other.<br>• Can we really test and verify AD without having any online processing.<br>• Decouple the verification of requirements from the handover to ops. Look to put together a test plan now and test on precursor datasets at the IDF. Then later look to rerun at SLAC later with LSSTCam data.<br>☑ Eric Bellm Leanne Guy to work on a plan to hand over the Alert Distribution System to Ops 16 May 2022 |
| AOB | Leanne Guy | Next meeting is 29 Nov 2021 | |

## List of SST tasks (Confluence)

| Description | Due date | Assignee | Task appears on |
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| ☐ Robert Lupton Clarify the meaning of time in the object table. 1 sentence description in sdm_schemas, can link to a short DMTN. *Update 2022-02-09: Meeting to resolve this on 2022-02-21* **28 Feb 2022** | 28 Feb 2022 | Robert Lupton | 2018-11-05 DM SST F2F Agenda and Meeting notes |
| ☐ Gregory Dubois-Felsmann check if SDM standardization is adequately represented in project documents, and whether DMTN-067 should be required.**31 Mar 2022** | 31 Mar 2022 | Gregory Dubois-Felsmann | 2022-02-14 DM-SST Virtual F2F Agenda and Meeting notes |
| ☐ Leanne Guy read RFC-842 and work out how much of this is in DM scope. Work with Eli Rykoff and Robert Lupton to make a plan to address this **28 Feb 2023** | 28 Feb 2023 | Leanne Guy | 2023-01-23 DM-SST Agenda and Meeting Notes |
| ☐ Leanne Guy talk to Steve R about presenting plans for the ShearObject table to PST and SciCollab chairs **20 Mar 2023** | 20 Mar 2023 | Leanne Guy | 2023-02-27 DM-SST Agenda and Meeting Notes |
| ☐ Jim Bosch Provide an example of a file containing a cell-based coadd for Gregory Dubois-Felsmann to examine to assess implications for firefly **31 Mar 2023** | 31 Mar 2023 | Jim Bosch | 2023-02-27 DM-SST Agenda and Meeting Notes |
| ☐ Leanne Guy talk to Gregory Dubois-Felsmann to review the original intent of the AFS-related Portal requirements before deciding on a course of action **29 May 2023** | 29 May 2023 | Leanne Guy | 2023-05-01 DM-SST Focus Meeting - Brokers in Commissioning |
| ☐ Leanne Guy Prepare to consult the PST on the question of providing compressed PVIs for AP outputs, to cover the period before the data become available in a DR. **02 Jun 2023** | 02 Jun 2023 | Leanne Guy | 2023-03-27 DM-SST Agenda and Meeting Notes |

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| ☐ | Jim Bosch Incorporate 30-60 day period for raws on disk into the strawman proposal and present to KT **26 Jun 2023** | 26 Jun 2023 | Jim Bosch | 2023-05-08 DM-SST Agenda and Meeting Notes |
| ☐ | Parker Fagrelius Patrick Ingraham how long will it take to do a scan as described? No need to scan the whole WL range but will require additional points outside nominal lambda range. **30 Jun 2023** | 30 Jun 2023 | Parker Fagrelius | 2023-03-27 DM-SST Agenda and Meeting Notes |
| ☐ | Colin Slater Gregory Dubois-Felsmann Robert Lupton Jeffrey Carlin Convene meeting/vf2f session on definition of dataset selection requirements in DMS-REQ-293 **31 Jul 2023** | 31 Jul 2023 | Colin Slater | 2023-07-10 DM-SST Agenda and Meeting Notes |
| ☐ | Eli Rykoff , Leanne Guy Develop a proposal for what calibration processing, hardware, data we actually need and what will be needed for DR1. This has implications for the ORR and for prioritisation of work in commissioning **31 Jul 2023** | 31 Jul 2023 | Eli Rykoff | 2023-01-30 DM-SST Agenda and Meeting Notes |
| ☐ | Yusra AlSayyad will look to see if there is any effort to help on option 1 **28 Aug 2023** | 28 Aug 2023 | Yusra AlSayyad | 2023-08-14 DM-SST Agenda and Meeting Notes |
| ☐ | Jim Bosch Provide a physical example of that a up on cell table would look like fo the Colin Slater / DAX team to review **31 Aug 2023** | 31 Aug 2023 | Jim Bosch | 2023-02-27 DM-SST Agenda and Meeting Notes |
| ☐ | "What is the pathway to defining the data products that are required to meet DMS-REQ-0266" Jeffrey Carlin **30 Nov 2023** | 30 Nov 2023 | Jeffrey Carlin | 2023-10-23 DM-SST vF2F Agenda and Meeting Notes |
| ☐ | Gregory Dubois-Felsmann Eli Rykoff to investigate splitting DMS-REQ-0298 (data access services for provenance) into separate 1a and 1b reqs. **30 Nov 2023** | 30 Nov 2023 | Gregory Dubois-Felsmann | 2023-10-23 DM-SST vF2F Agenda and Meeting Notes |
| ☐ | Leanne Guy Gregory Dubois-Felsmann , possible others small group to write description of how our deployment strategy meets DMS-REQ-0297. **30 Nov 2023** *2024-01-30, See DMS-REQ-0297 -- Deployment Strategy* | 30 Nov 2023 | Leanne Guy | 2023-10-23 DM-SST vF2F Agenda and Meeting Notes |
| ☐ | Jeffrey Carlin follow up with KT on DMS-REQ-0176 and DMS-REQ-0315 to update /disaggregate this for latest base/summit infrastructure split. **30 Nov 2023** | 30 Nov 2023 | Jeffrey Carlin | 2023-10-23 DM-SST vF2F Agenda and Meeting Notes |
| ☐ | Jim Bosch Follow up on the possibility of investigating further the ability to process 2 collections in parallel. **31 Jan 2024** | 31 Jan 2024 | Jim Bosch | 2023-12-04 DM-SST Agenda and Meeting Notes |
| ☐ | Jeffrey Carlin Gregory Dubois-Felsmann Colin Slater Define verifications for the consistency of collections part of this requirements - e.g. OSS-118 **31 Jan 2024** | 31 Jan 2024 | Jeffrey Carlin | 2023-12-04 DM-SST Agenda and Meeting Notes |
| ☐ | Gregory Dubois-Felsmann Jim Bosch Setup a meeting between science platform and middleware regarding user storage for butler purposes. | | Gregory Dubois-Felsmann | 2023-10-23 DM-SST vF2F Agenda and Meeting Notes |