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# Accounting for the new benchmark(s)

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WLCG GDB, 9 March 2022



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# Outline

1. Requirements
2. Existing workflow
3. Planned changes
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5. Next steps

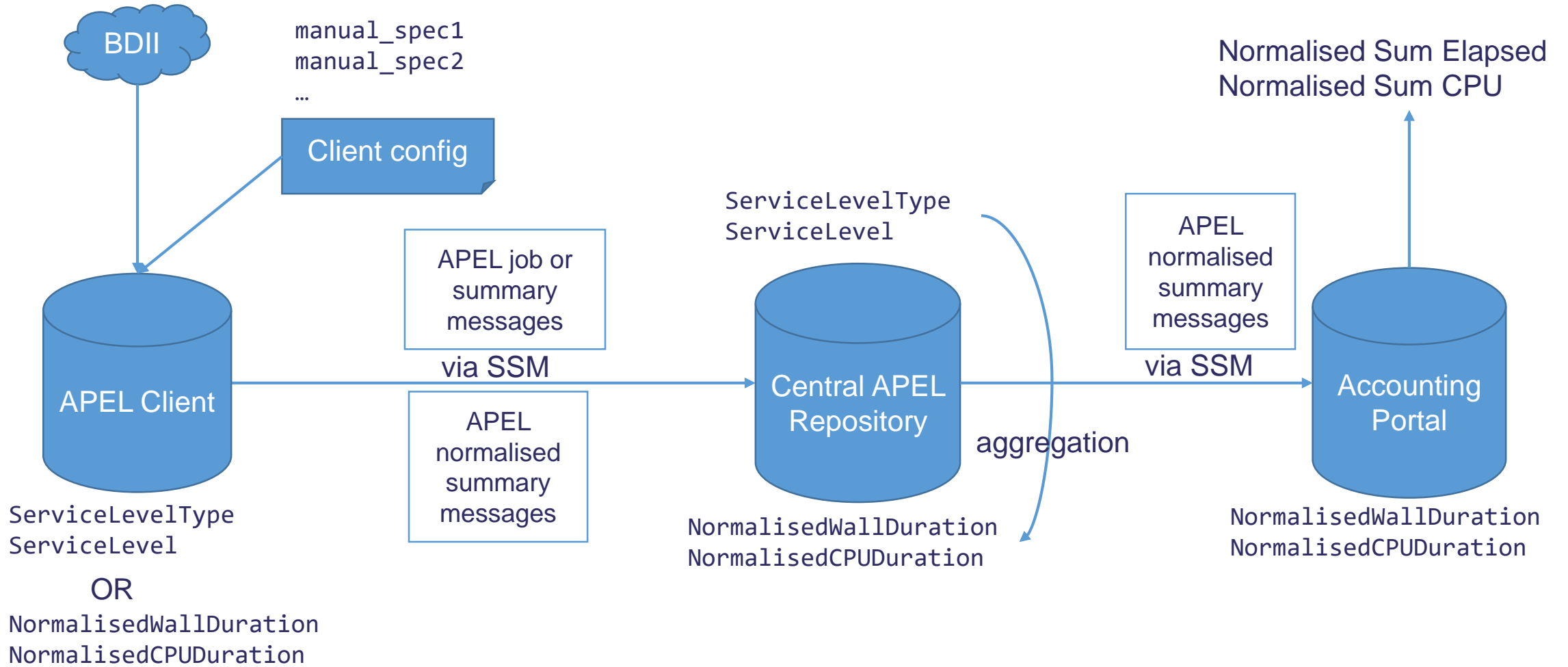
# Requirements

- Support for new benchmark metrics in clients, message formats (job, summary or normalised summary), Repository and Portal alongside the existing benchmarks
- Simplify any future changes in benchmark (including versioning)
- Method to query which sites are publishing the new benchmark (to support decision making on timing of switchover)
- Ability to display consumption depending on the benchmark selected in the Accounting Portal
- WLCG Accounting Utility should be modified to provide comparison of the consumption in both benchmarks

# Existing workflow

- Most sites include benchmarks as part of the APEL accounting records (job or summary)
- Many sites only provide final usage  $\times$  benchmark values in “normalised summaries”
- Benchmarks can be pulled in from BDIIs or set manually in local APEL accounting client config
- Sites apply a scaling factor between execute nodes so that they can use a single benchmark per cluster

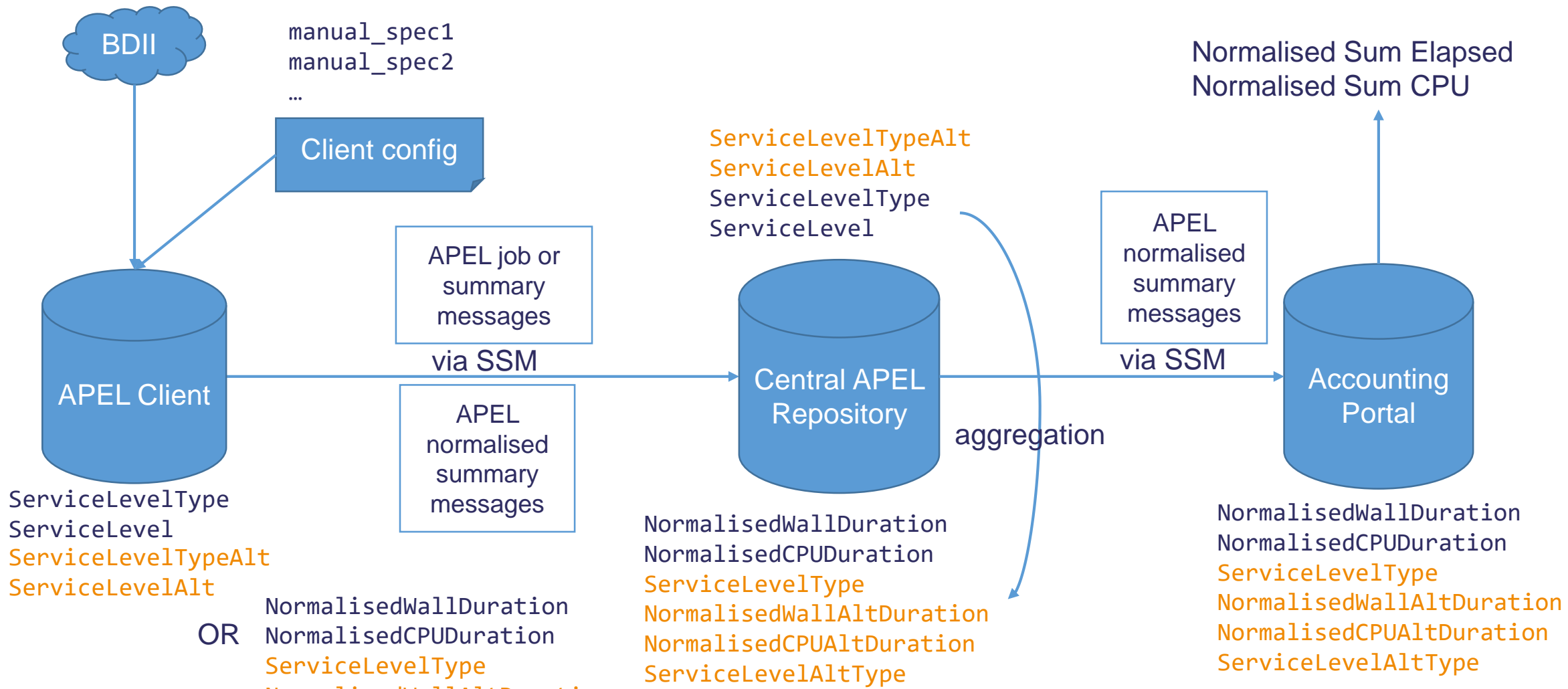
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# Planned changes

- Add fields to allow an additional benchmark value and benchmark type to job, summary and normalised summary records and Repository schema
  - Allows direct comparisons to be made between old and new benchmarks if both supplied
  - Requires additional record fields and schema changes
  - Includes changes to accounting clients, Repository and Portal
- Normalised accounting messages to include benchmark type that the records were normalised with
- Method to generate reports on which benchmarks sites are reporting can be added in CRIC

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# Draft message extracts

- Job records (similar in Summaries)
  - Accept an associative array of benchmarks
  - Only read benchmarks we're interested in

```
APEL-individual-job-message: v0.4
```

```
...
```

```
ServiceLevel: {HEPSPEC:11.4,  
               HEP-SCORE2x: 15.3}
```

```
%%
```

```
...
```

- Normalised summaries
  - Addition of service level type and alternative duration fields

```
APEL-summary-job-message: v0.4
```

```
...
```

```
NormalisedWallDuration: 728033785
```

```
NormalisedCPUDuration: 675036676
```

```
ServiceLevelType: HEPSPEC
```

```
NormalisedWallAltDuration: 620033785
```

```
NormalisedCPUAltDuration: 505036676
```

```
ServiceLevelAltType: HEP-SCORE2x
```

```
%%
```

```
...
```



# Next Steps

- Document message format changes
- Set up message queues and exchange test records, which could be done in the next few months
- Find volunteer sites to start testing with
- Core work to APEL client and Repository would take around 6 months
- WLCG Accounting Task Force is coordinating with other parties that might need to make changes
  - ARC
  - HTCondor
  - EGI Accounting Portal



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**Thank you**