WP9

John Seddon

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PRIMAVERA

Technical issues

- The facilities to store the data on Jasmin (480TB of disk, 2.5PB of tape) are ready
- Software tools to write to tape and extract from tape are almost ready – Jon to complete
- Jasmin's bandwidth is comfortably sufficient for several groups to be uploading volumes of data concurrently
- The greater cause of concern is that the 480TB (100TB of which is already used, hopefully to be cleared) will cause a bottleneck, because the disk space needs to act as a staging area for data arriving to Jasmin (and heading for tape) and data extracted for post processing
- Jon and I will have to monitor the disk closely, which could include
  - Implementing an upload queue
  - Strict controls of extracted data for postprocessing which is left untouched – automatically deletion may have to apply

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Technical issues

- “Pre” Primavera data on Jasmin needs to be cleared, and any other data unless there’s very good reason
- Data volume of WP5 was expected to be 15-20TB (monthly means only). If more is expected, there will need to be a negotiation.
- WP10/WP11 have provided an updated (final?) data request that needs to be reviewed and distributed

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Timescales

- The main task is for the groups to keep WP9 informed:
  - Experiment start date(s)
  - Run rate (if different from earlier estimates)
  - Data volumes (if different from earlier estimates)
  - Any problems which affect the completion date of the experiments and upload of the data to Jasmin

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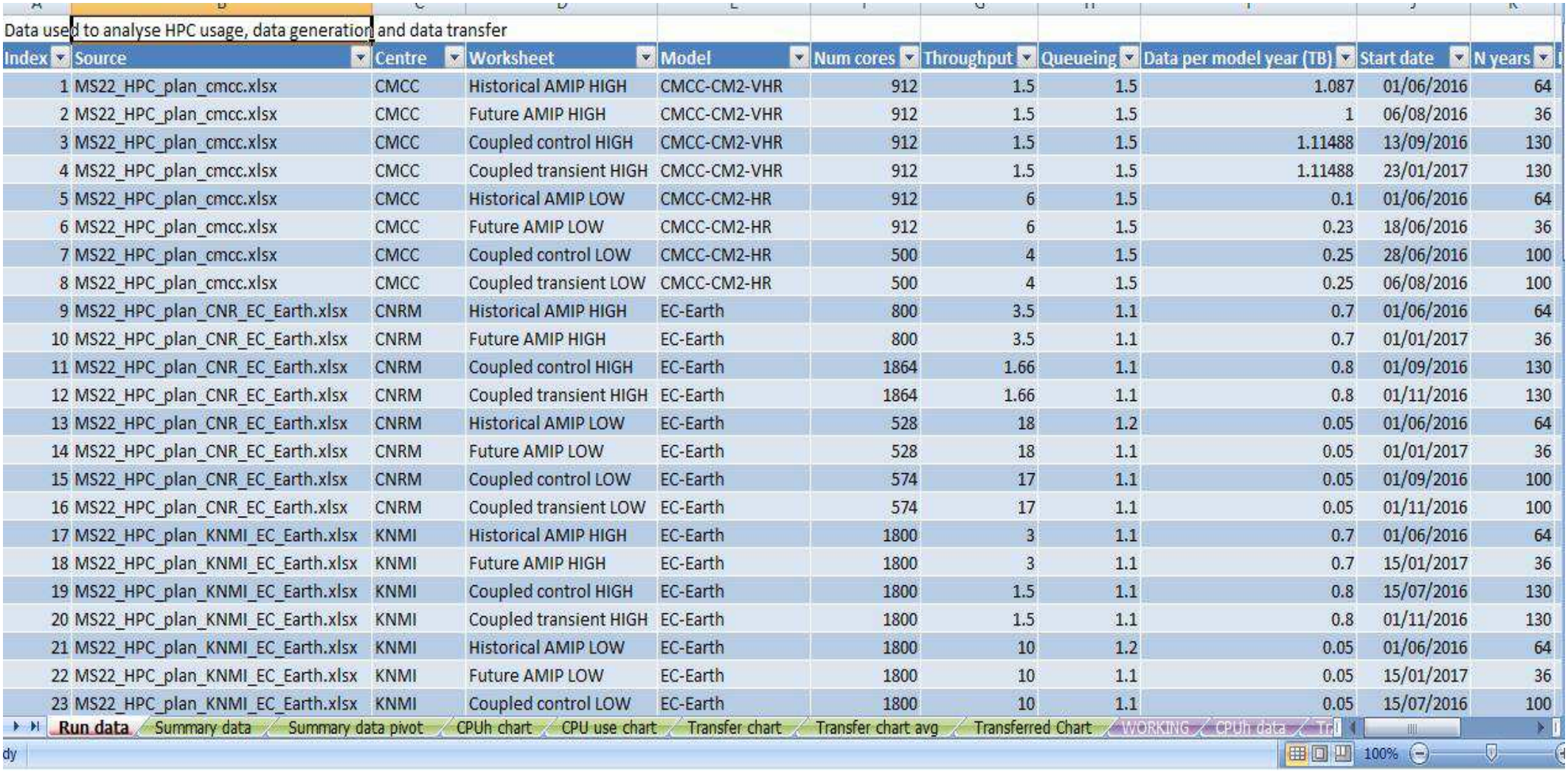

Data used to analyse HPC usage, data generation and data transfer

Index	Source	Centre	Worksheet	Model	Num cores	Throughput	Queueing	Data per model year (TB)	Start date	N years
1	MS22_HPC_plan_cmcc.xlsx	CMCC	Historical AMIP HIGH	CMCC-CM2-VHR	912	1.5	1.5	1.087	01/06/2016	64
2	MS22_HPC_plan_cmcc.xlsx	CMCC	Future AMIP HIGH	CMCC-CM2-VHR	912	1.5	1.5	1	06/08/2016	36
3	MS22_HPC_plan_cmcc.xlsx	CMCC	Coupled control HIGH	CMCC-CM2-VHR	912	1.5	1.5	1.11488	13/09/2016	130
4	MS22_HPC_plan_cmcc.xlsx	CMCC	Coupled transient HIGH	CMCC-CM2-VHR	912	1.5	1.5	1.11488	23/01/2017	130
5	MS22_HPC_plan_cmcc.xlsx	CMCC	Historical AMIP LOW	CMCC-CM2-HR	912	6	1.5	0.1	01/06/2016	64
6	MS22_HPC_plan_cmcc.xlsx	CMCC	Future AMIP LOW	CMCC-CM2-HR	912	6	1.5	0.23	18/06/2016	36
7	MS22_HPC_plan_cmcc.xlsx	CMCC	Coupled control LOW	CMCC-CM2-HR	500	4	1.5	0.25	28/06/2016	100
8	MS22_HPC_plan_cmcc.xlsx	CMCC	Coupled transient LOW	CMCC-CM2-HR	500	4	1.5	0.25	06/08/2016	100
9	MS22_HPC_plan_CNR_EC_Earth.xlsx	CNRM	Historical AMIP HIGH	EC-Earth	800	3.5	1.1	0.7	01/06/2016	64
10	MS22_HPC_plan_CNR_EC_Earth.xlsx	CNRM	Future AMIP HIGH	EC-Earth	800	3.5	1.1	0.7	01/01/2017	36
11	MS22_HPC_plan_CNR_EC_Earth.xlsx	CNRM	Coupled control HIGH	EC-Earth	1864	1.66	1.1	0.8	01/09/2016	130
12	MS22_HPC_plan_CNR_EC_Earth.xlsx	CNRM	Coupled transient HIGH	EC-Earth	1864	1.66	1.1	0.8	01/11/2016	130
13	MS22_HPC_plan_CNR_EC_Earth.xlsx	CNRM	Historical AMIP LOW	EC-Earth	528	18	1.2	0.05	01/06/2016	64
14	MS22_HPC_plan_CNR_EC_Earth.xlsx	CNRM	Future AMIP LOW	EC-Earth	528	18	1.1	0.05	01/01/2017	36
15	MS22_HPC_plan_CNR_EC_Earth.xlsx	CNRM	Coupled control LOW	EC-Earth	574	17	1.1	0.05	01/09/2016	100
16	MS22_HPC_plan_CNR_EC_Earth.xlsx	CNRM	Coupled transient LOW	EC-Earth	574	17	1.1	0.05	01/11/2016	100
17	MS22_HPC_plan_KNMI_EC_Earth.xlsx	KNMI	Historical AMIP HIGH	EC-Earth	1800	3	1.1	0.7	01/06/2016	64
18	MS22_HPC_plan_KNMI_EC_Earth.xlsx	KNMI	Future AMIP HIGH	EC-Earth	1800	3	1.1	0.7	15/01/2017	36
19	MS22_HPC_plan_KNMI_EC_Earth.xlsx	KNMI	Coupled control HIGH	EC-Earth	1800	1.5	1.1	0.8	15/07/2016	130
20	MS22_HPC_plan_KNMI_EC_Earth.xlsx	KNMI	Coupled transient HIGH	EC-Earth	1800	1.5	1.1	0.8	01/11/2016	130
21	MS22_HPC_plan_KNMI_EC_Earth.xlsx	KNMI	Historical AMIP LOW	EC-Earth	1800	10	1.2	0.05	01/06/2016	64
22	MS22_HPC_plan_KNMI_EC_Earth.xlsx	KNMI	Future AMIP LOW	EC-Earth	1800	10	1.1	0.05	15/01/2017	36
23	MS22_HPC_plan_KNMI_EC_Earth.xlsx	KNMI	Coupled control LOW	EC-Earth	1800	10	1.1	0.05	15/07/2016	100

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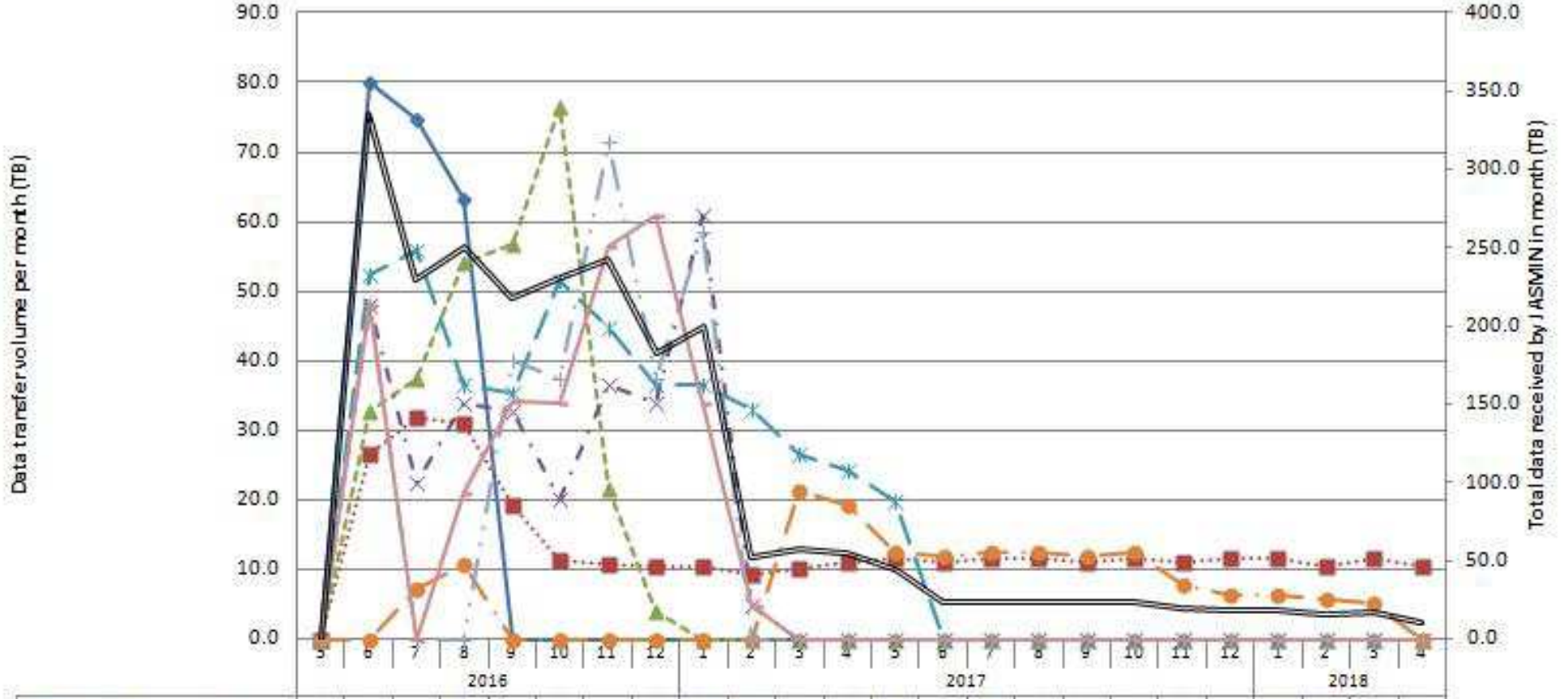
Monthly data transfer totals (TB)



Sum of BSC:Marenostrum	0.0	80.0	74.9	63.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum of CMCC:IBM iDataPlex	0.0	26.5	31.9	30.9	19.2	11.2	10.9	10.3	10.3	9.3	10.0	11.1	11.5	11.1	11.5	11.5	11.1	11.5	11.1	11.5	11.5	10.4	11.5	10.4
Sum of DKRZ:ATOS/BULLX	0.0	32.7	37.3	54.2	56.7	76.6	21.5	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum of KNMI:BULLX B500	0.0	48.0	22.5	33.8	32.7	20.0	36.6	33.8	60.8	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum of Met Office:Cray XC40	0.0	52.3	55.9	36.4	35.2	51.4	44.9	36.4	36.4	32.9	26.6	24.3	19.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum of Meteo France:Bullx	0.0	0.0	7.3	10.7	0.0	0.0	0.0	0.0	0.0	0.0	21.2	19.3	12.4	12.0	12.4	12.4	12.0	12.4	7.9	6.2	6.2	5.6	5.2	0.0
Sum of Munich:Supermuc	0.0	48.0	0.0	0.0	40.0	37.4	71.6	37.4	58.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum of SMHI:Beskow (Cray)	0.0	48.0	0.0	21.1	34.1	33.8	56.6	60.8	33.8	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum of Total	0.0	335.5	229.8	250.3	218.0	230.5	242.0	182.7	199.9	51.7	57.8	54.8	43.8	23.1	23.9	23.9	23.1	23.9	19.0	17.7	17.7	16.0	16.7	10.4

Summary data pivot | CPUh chart | CPU use chart | **Transfer chart** | Transfer chart avg | Transferred Chart | WORKING | CPUH

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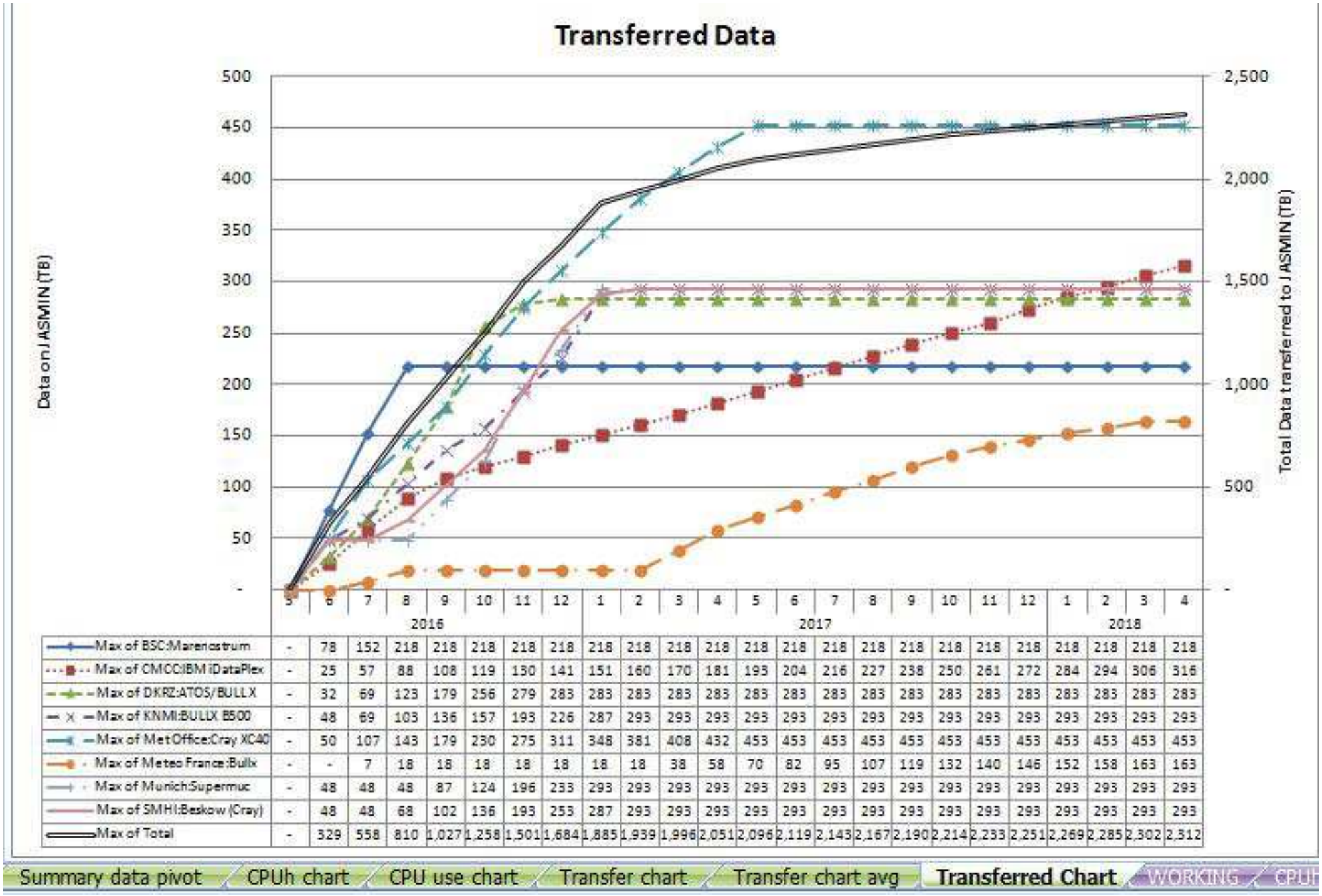

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Deliverables and Milestones over the next year

D9.4

Description:
Publication of PRIMAVERA Stream1 data set
Lead:
METOFFICE
Dissemination level:
PU
Type:
R

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