Data Centre Chart Analysis

March 2012

Monthly VDC Bandwidth Graphs – March 2012

Internet Bandwidth – VDC

LDBVDC1 - Internet - Traffic - Gi0/0

From 2012/03/01 00:01:00 To 2012/03/31 23:59:00

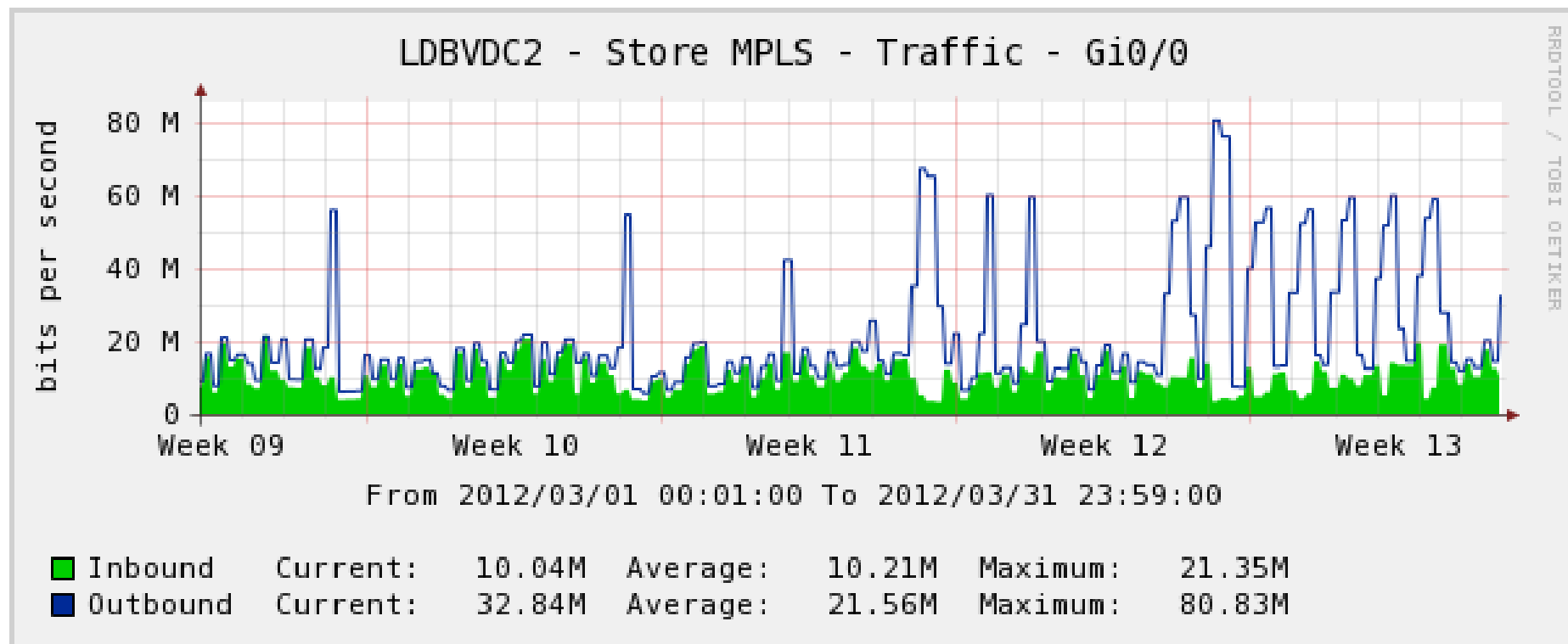| ■ Inbound | Current: | 892.49k | Average: | 3.18M | Maximum: | 12.29M |
| ■ Outbound | Current: | 113.65k | Average: | 421.00k | Maximum: | 1.23M |
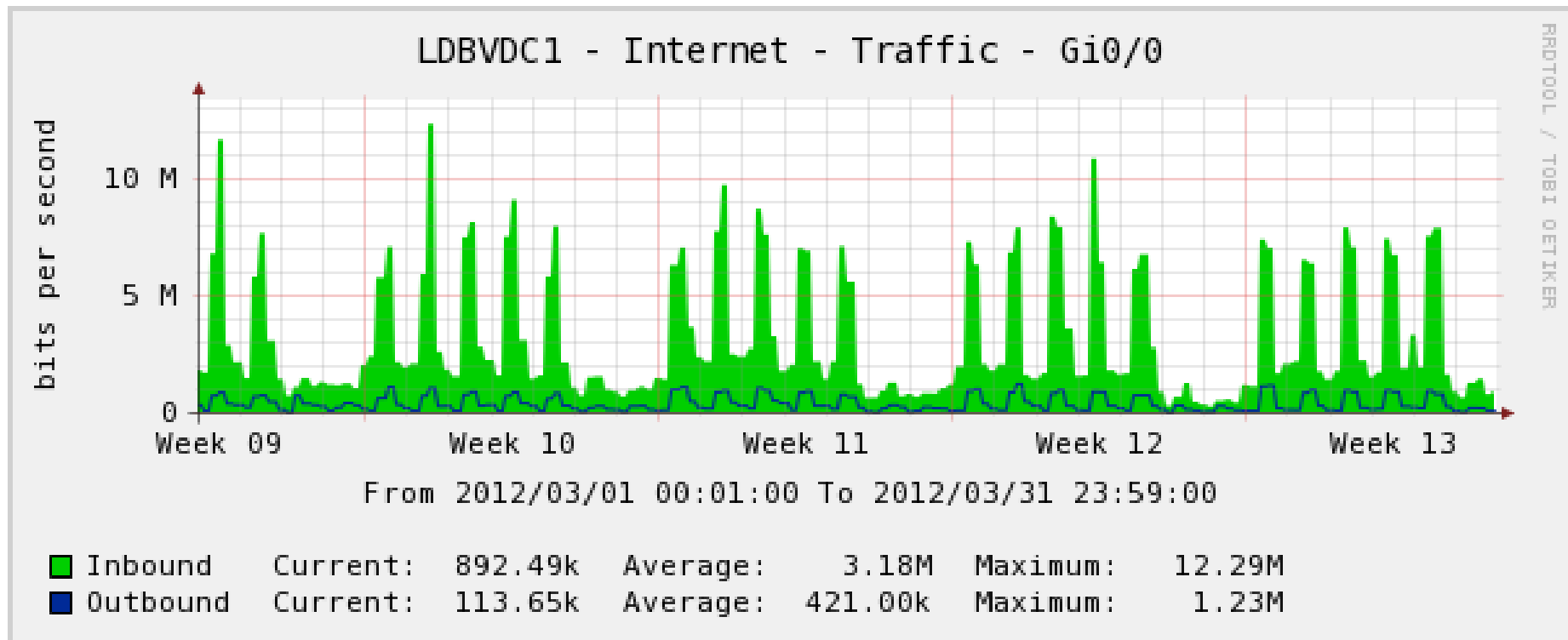
Summary: Graphical view of traffic going through Head Office to the Internet. The maximum traffic allowed is 20Mbs.

Observation: During HO core hours (8:00 to 4:30), Internet link is highly utilize and sustained at 40% of the available bandwidth. Occasionally have seen the bandwidth reach more than 10 MB/ second.

Recommendation: N/A

Monthly VDC Bandwidth Graphs – March 2012

Bandwidth between HO and Stores

LDBVDC2 - Store MPLS - Traffic - Gi0/0

From 2012/03/01 00:01:00 To 2012/03/31 23:59:00

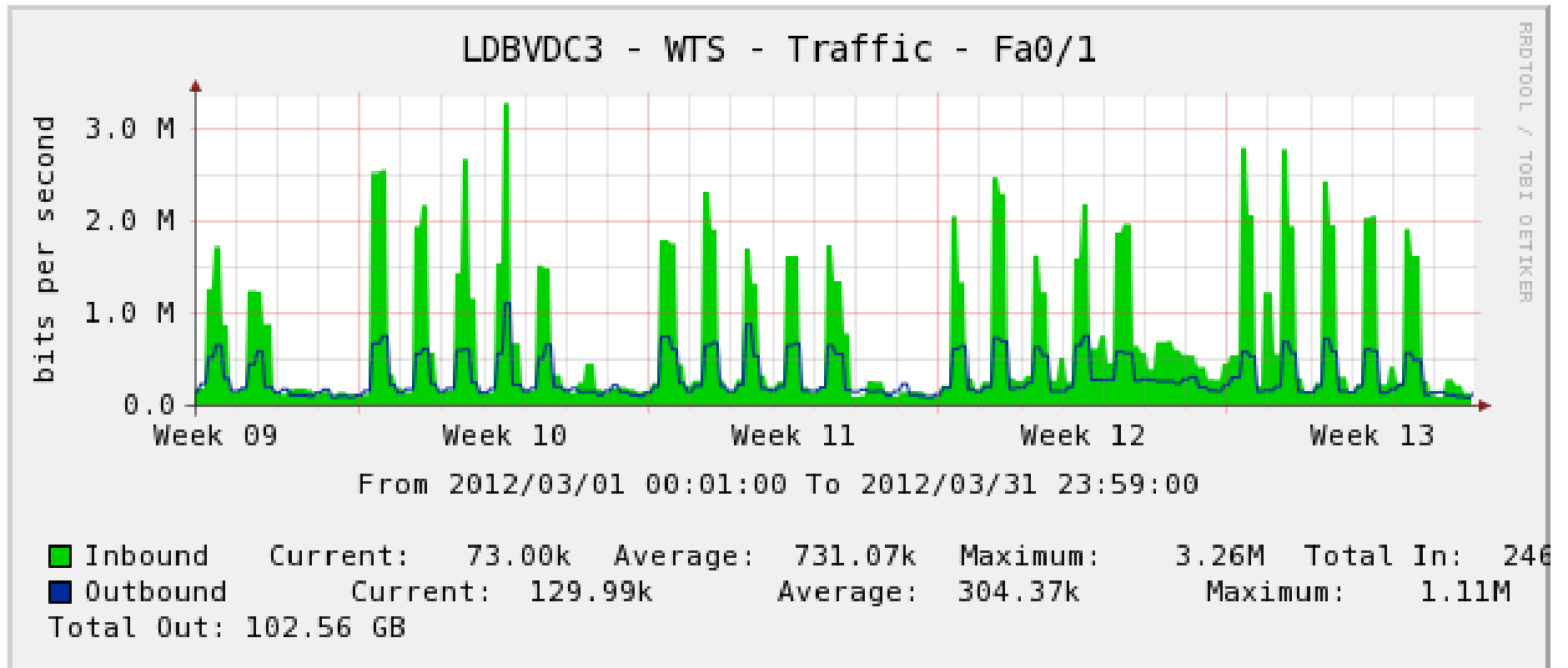|						
■ Inbound	Current:	10.04M	Average:	10.21M	Maximum:	21.35M
■ Outbound	Current:	32.84M	Average:	21.56M	Maximum:	80.83M

Summary: Graphical view of traffic going through Stores to Head Office via Internet.

Observation: The end of the month the graph shows high utilization for traffic going outbound because of PCI, and store traffic e.g. ETN, and Store orders etc.

Recommendation: N/A

Monthly VDC Bandwidth Graphs – March 2012

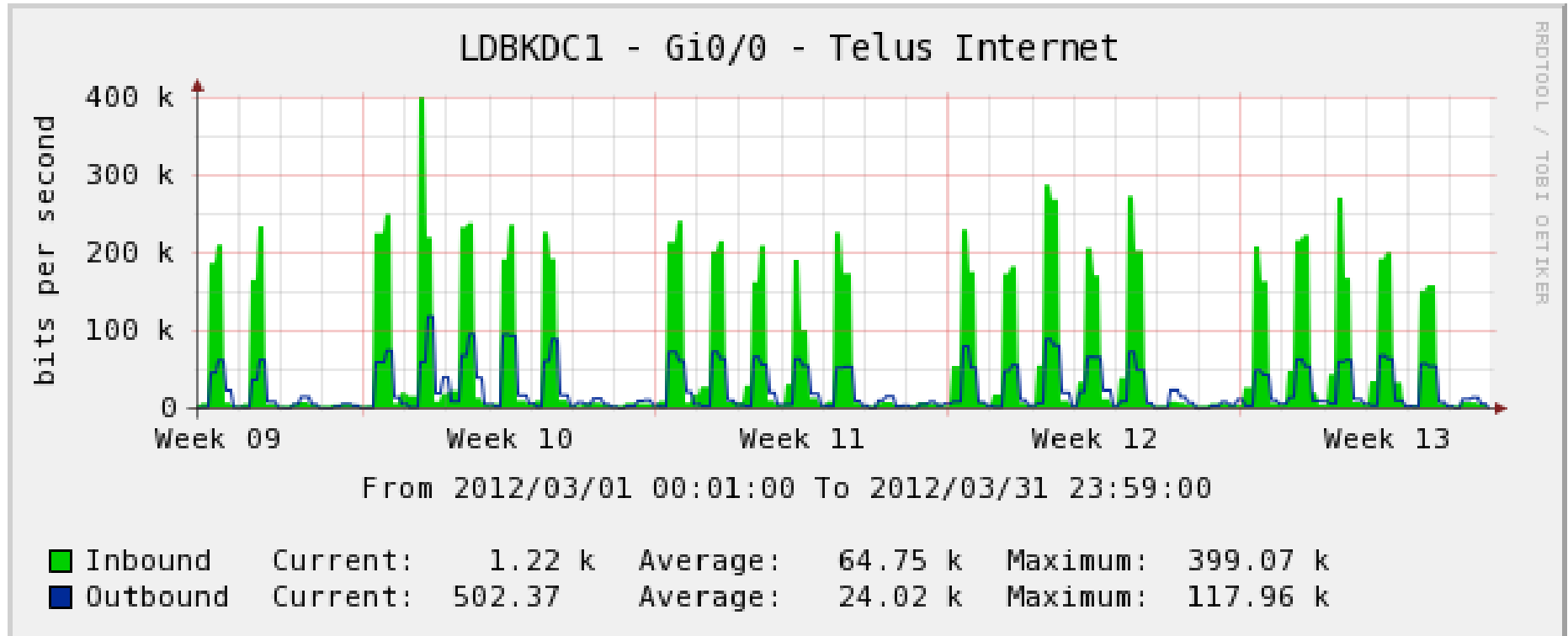## Bandwidth used for Email, DNS and any Government websites

LDBVDC3 - WTS - Traffic - Fa0/1

RRDTOOL / TOBI OETIKER

```
bits per second

3.0 M

2.0 M

1.0 M

0.0
       Week 09      Week 10      Week 11      Week 12      Week 13
         From 2012/03/01 00:01:00 To 2012/03/31 23:59:00
```

☐ Inbound   Current: 73.00k Average: 731.07k Maximum: 3.26M Total In: 246
■ Outbound   Current: 129.99k   Average: 304.37k   Maximum: 1.11M
Total Out: 102.56 GB

Summary: Graphical view of traffic going through WTS to Head Office via Internet.

Observation: Network utilization of the service above is deemed working within normal parameters.

Recommendation: N/A

Monthly KDC Bandwidth Graphs – March 2012

Internet Bandwidth – KDC

|						
■ Inbound	Current:	1.22 k	Average:	64.75 k	Maximum:	399.07 k
■ Outbound	Current:	502.37	Average:	24.02 k	Maximum:	117.96 k

Summary: Graphical view of traffic going through KDC to the Internet.

Observation: Minimal use however on March 06 there was a brief spike due to data flow between VDC and KDC.

Recommendation: N/A

Monthly KDC Bandwidth Graphs – March 2012

Bandwidth between KDC and Stores
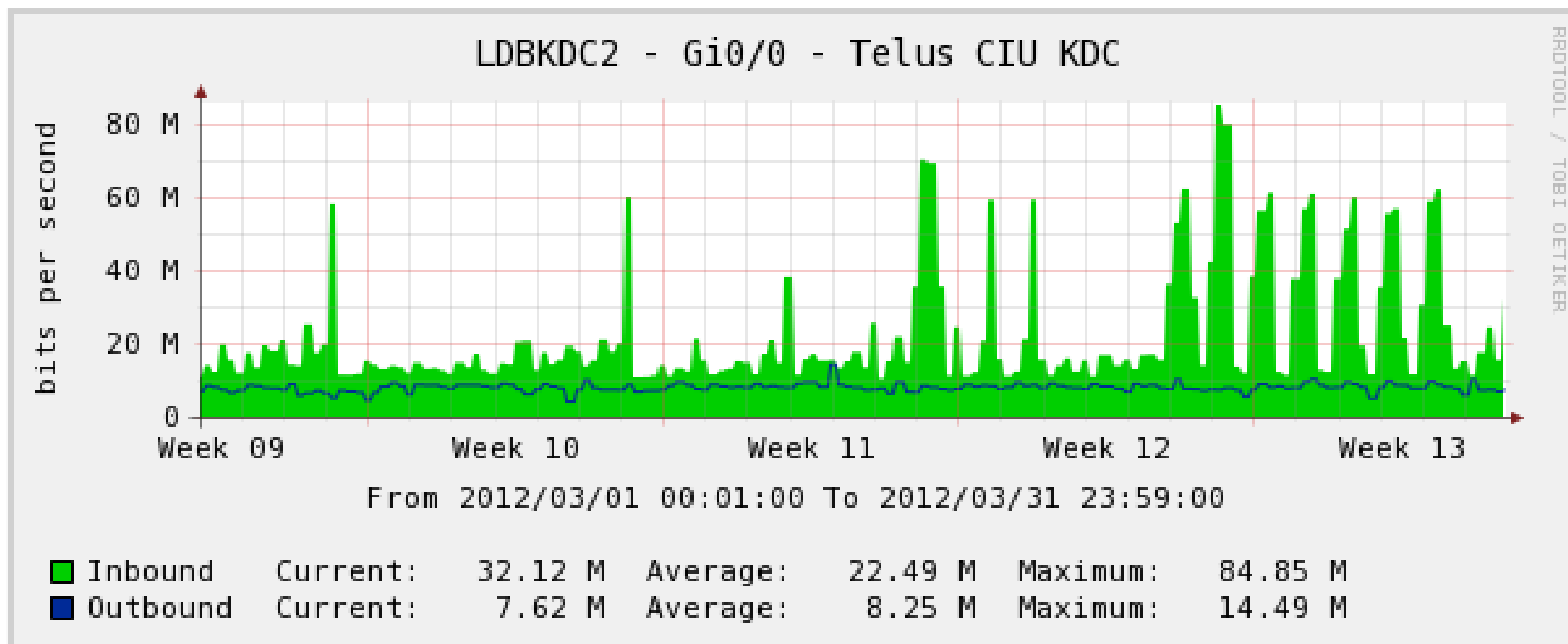
Summary: Graphical view of traffic going through Stores to KDC via Internet.

Observation: High volume towards the end of the month for preparation of end of year and long weekend. (same as VDC2 above).

Recommendation: N/A
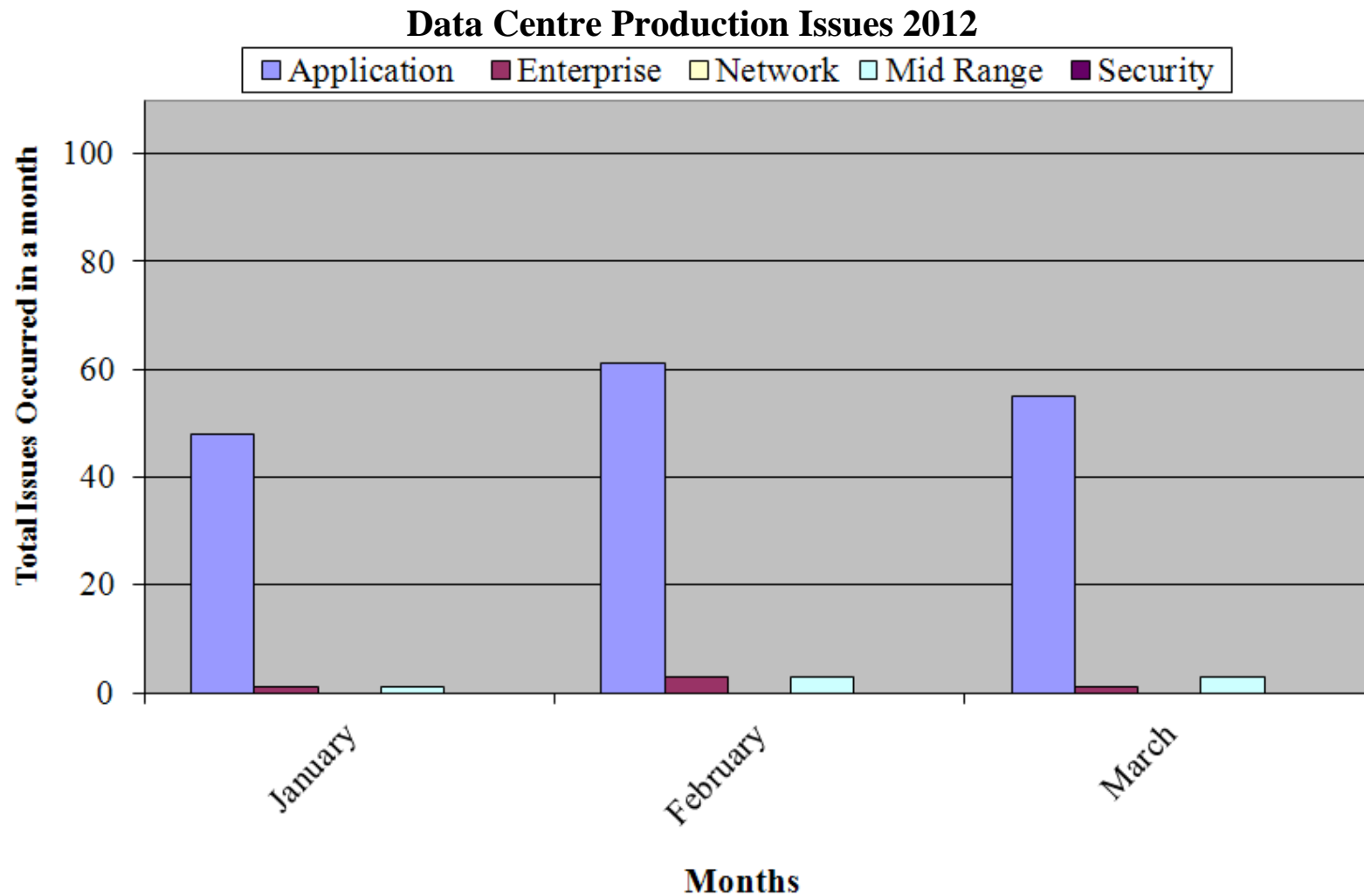
Monthly KDC Bandwidth Graphs – March 2012

Bandwidth used for Email, DNS, and KDC via WTS
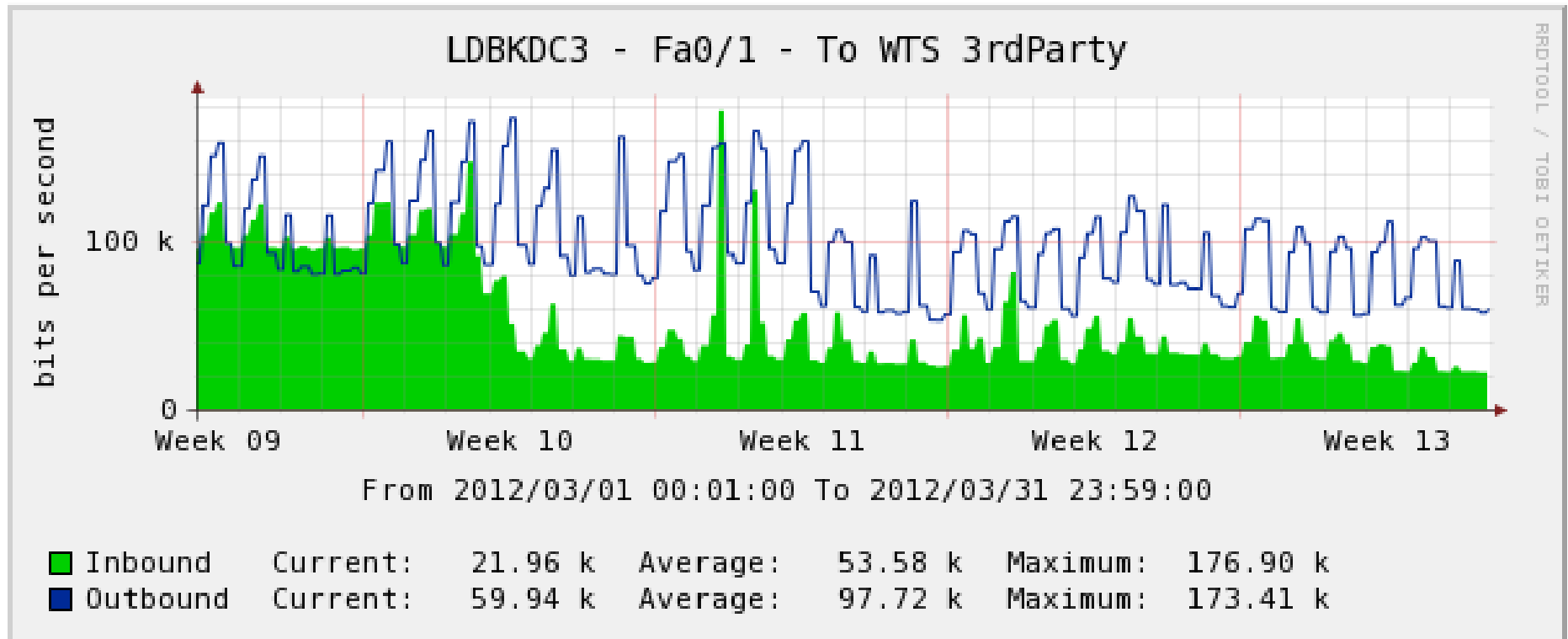
Summary: Graphical view of traffic going through KDC to WTS via Internet.

Observation: Minimal use

**Recommendation:** N/A

Data Centre Production Issues 2012

Summary: High level graphical view of monthly production issues from January 2012 to March 2012. Input comes from Operations daily status report.

Observation: Majority are application issues of which 67% are Autosys jobs and 19% are run away process (see BMC tickets for more information) for the month of March.

Recommendation: N/A

# Sales – Finance Data Availability - March 2012
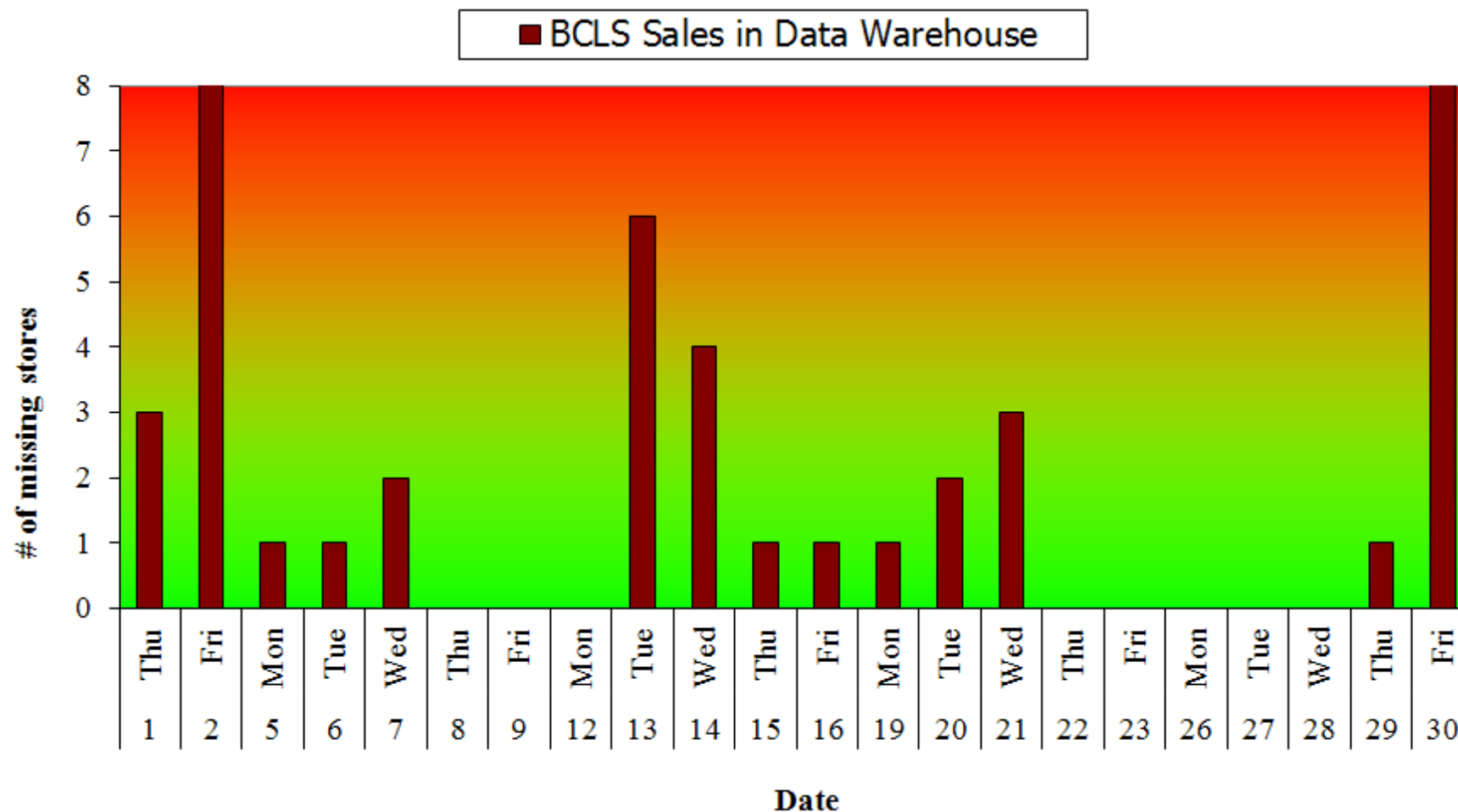
Summary: Graphical view of transmitted BCLS Stores Financial Sales Data to Head Office in Data Warehouse.

Observation: Data Warehouse Autosys jobs that were halted (put ON_ICE) are now running as per normal with the new Autosys jobs being stabilized. The two spikes (beginning and end of the month) is simply sales data coming in later in the day.

Recommendation: N/A

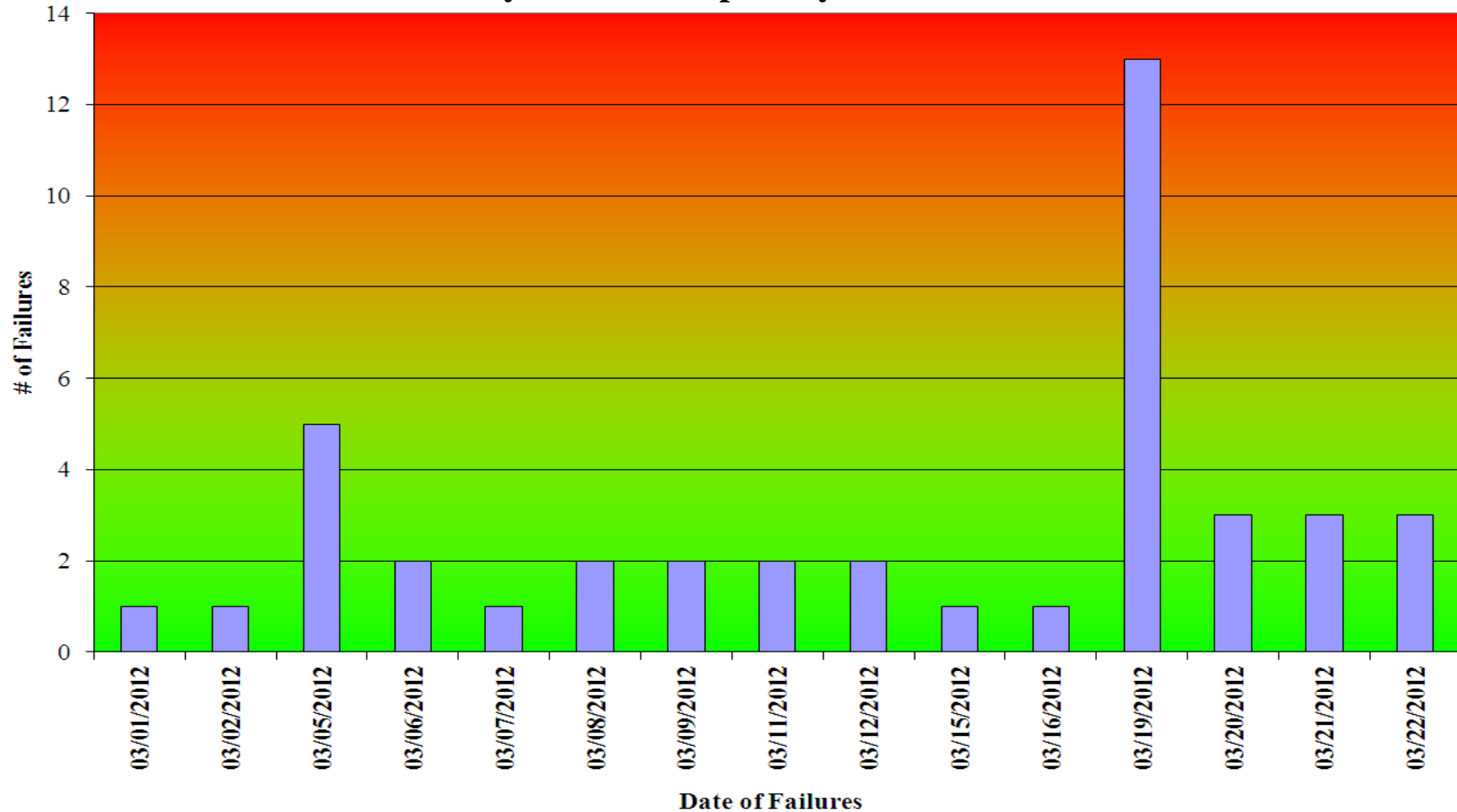# Daily Availability of Business Application – March 2012
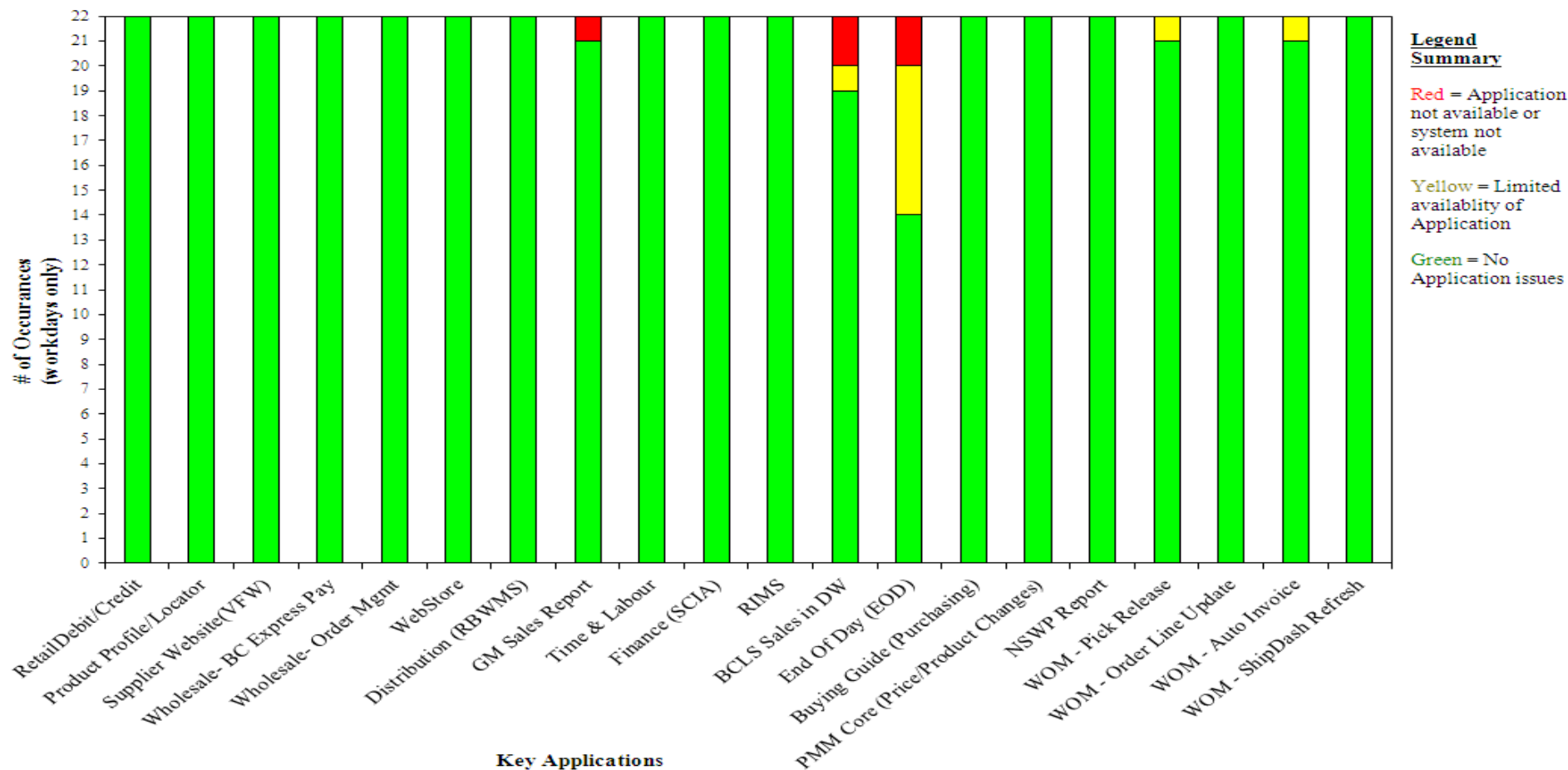
Summary: High level graphical view of Business Applications availability.

Observation: GM Sales, BCLS Sales in DW and EOD had major issues. Please refer to BMC # 469829, 470492 and 472943 for details.

**Recommendation:** N/A

Autosys Jobs failed per day – March 2012

Summary: High level graphical view of Production Autosys Job failures for the month of March 2012.

Observation: March 19th – a lot of SYS jobs were hung and subsequently Unix boxes were in Running state but not doing anything. Please refer to BMC # 472339 and 472341 for details.

Recommendation: N/A

Remote Access on Weekday vs. Weekend – March 2012
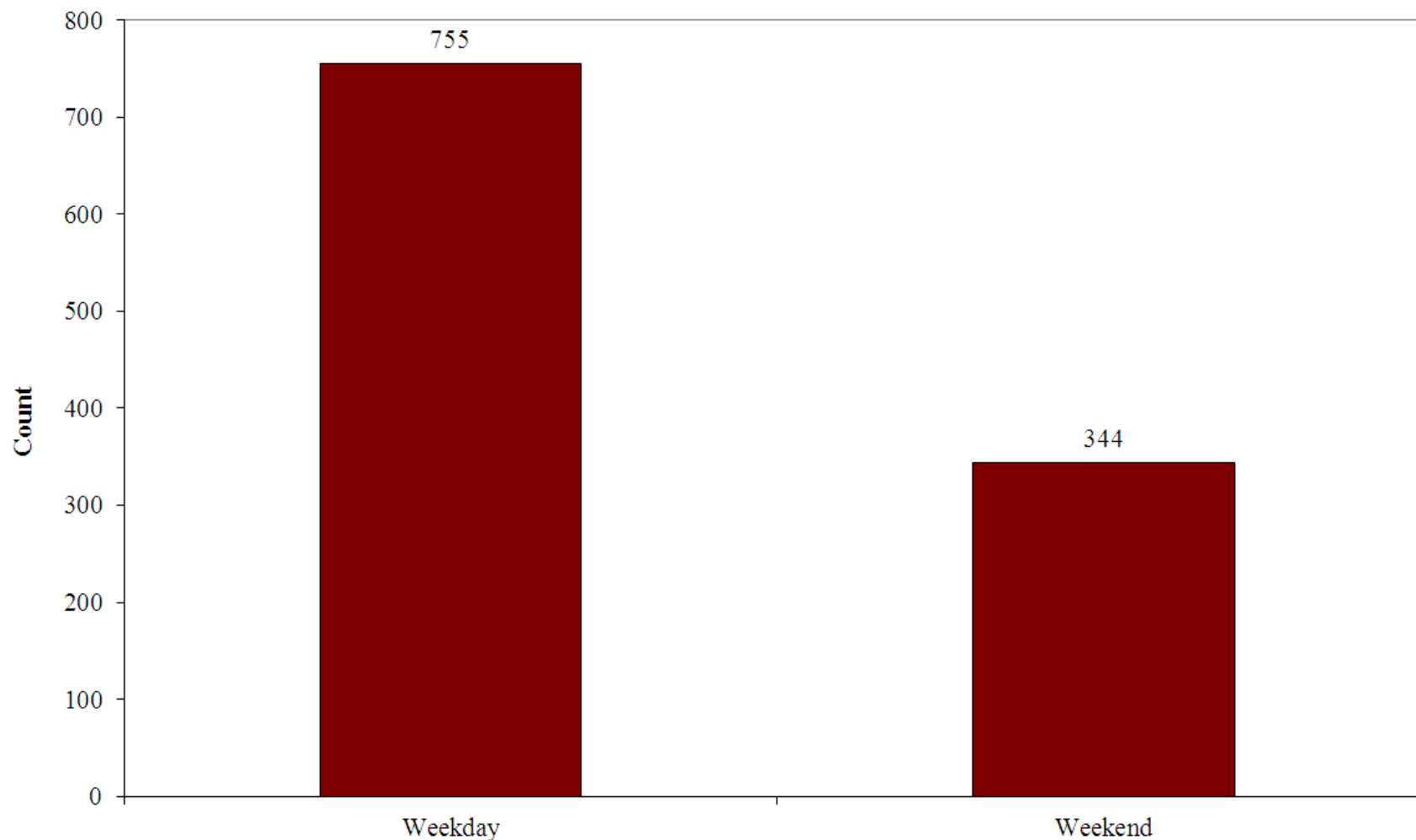
* Note: Weekends includes Stat holidays
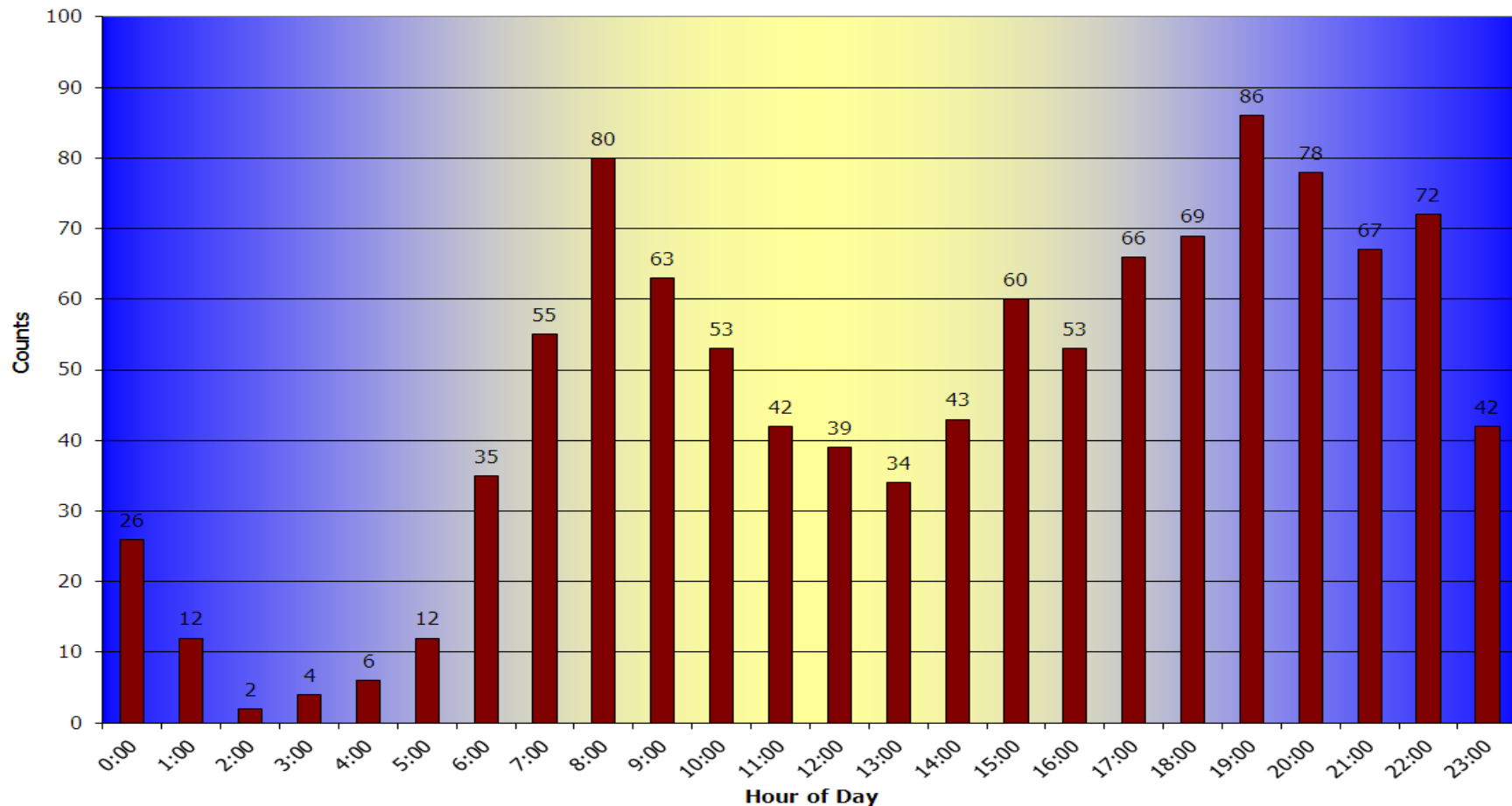
Summary: High level weekday and weekend graphical view of Users remotely accessing Head Office resources.

Observation: More people accessing Head Office resources during the Weekday in the Evening hours

Recommendation: N/A

Remote Access by Hour of Day – March 2012

Login by Connectra

Summary: High level graphical view of Users remotely accessing Head Office resources shown in hours of the day for the month of March 2012.
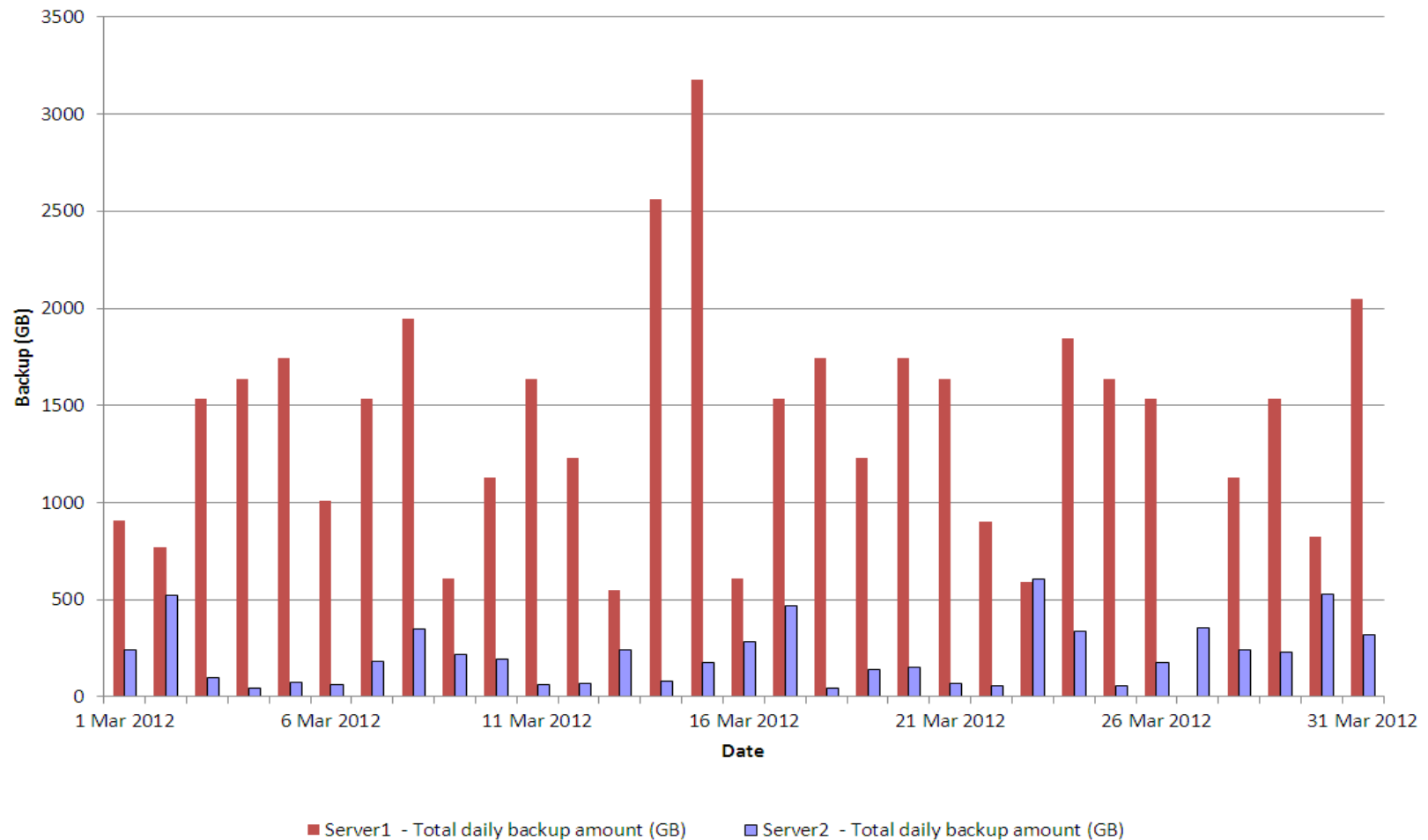
Observation: More people accessing Head Office resources in the morning (between 7am – 11am) and again in the afternoon thru to the late evening (2pm – Midnight). *** Note: Currently capacity for concurrent users is 50.

Recommendation: N/A

Total Daily Backup Amount (GB) – March 2012

Server1 - Total daily backup amount (GB)   Server2 - Total daily backup amount (GB)

Summary: High level graphical view graphical view of TSM Daily Backup for the month of March.
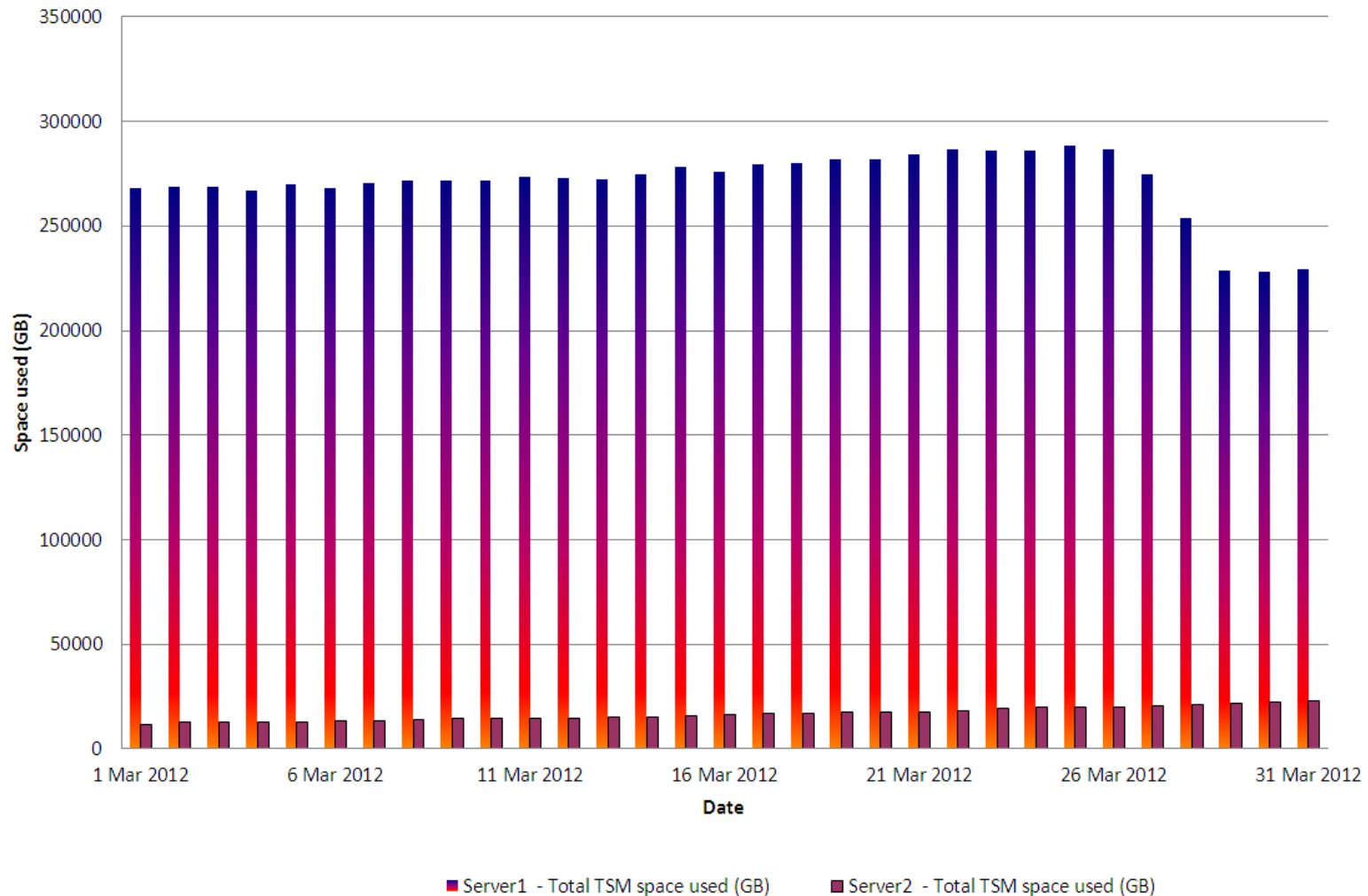
Observation: March 15th – 3.1TB of SAN storage data was backed up on TSM. 1.5TB of SAN storage as transitional data constantly increases/decreases as data is migrated to tape.

Recommendation: Not applicable

Total TSM Space Used (GB) – March 2012

Summary: High level graphical view of data stored on TSM per day for the month of March.
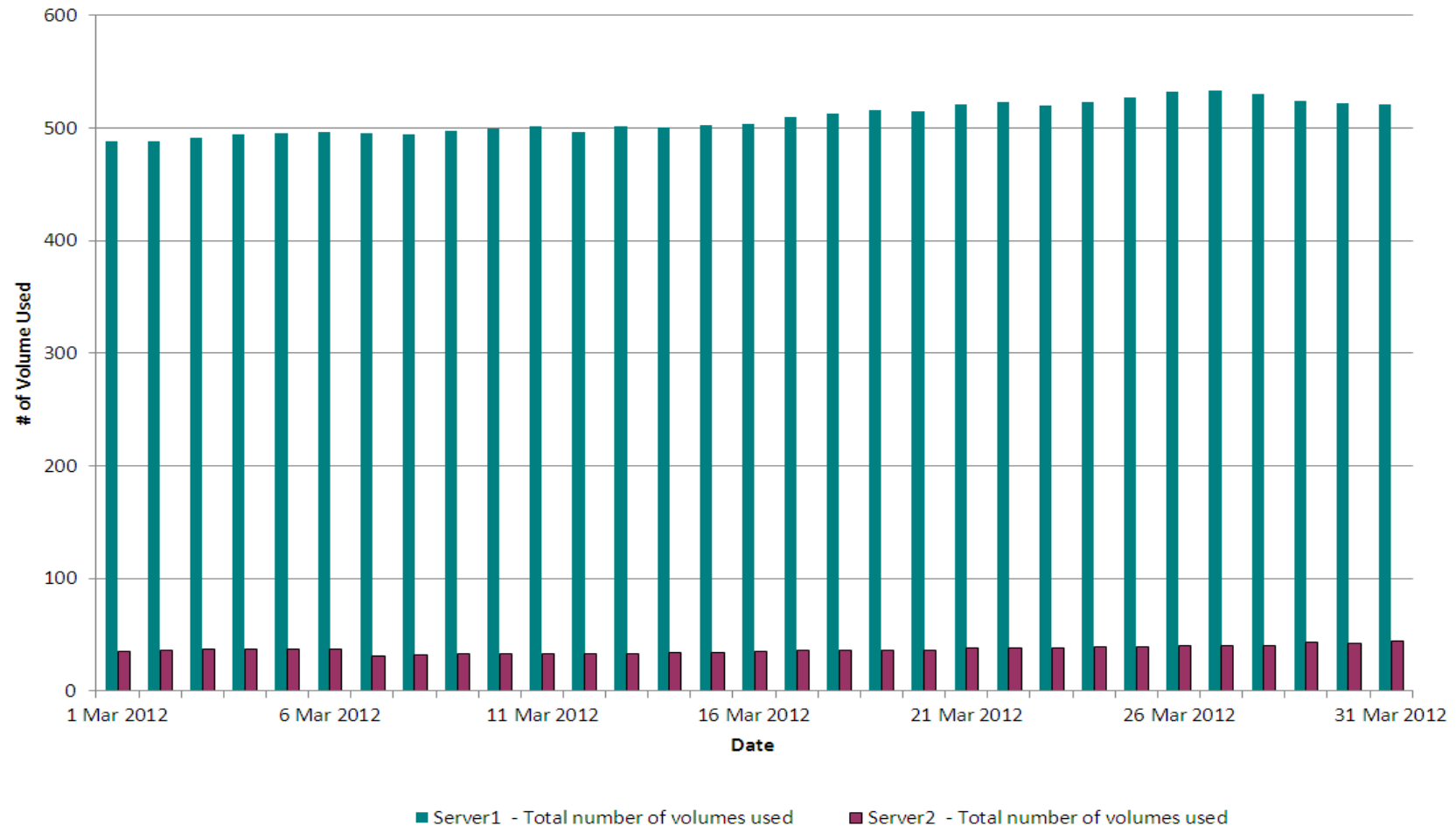
Observation: Space used is relatively the same but towards the end of the month data was cleared from the Oracle databases and thus as shown in the above graph.

Recommendation: Not applicable

Total Number of Volumes Used – March 2012

Server1 - Total number of volumes used	Server2 - Total number of volumes used

Summary: High level graphical view of TSM using the number of volumes in a day for the month of March.

Observation: Currently there is 451 tape volumes used by TSM to backup data which includes combination of LTO3 and LTO4. This includes tapes stored offsite. Each LTO4 tape holds 1.5TB. The library has 253 tape slots and 225 of them are in use. Vault capacity is infinite as we continue to order tapes as required.

Recommendation: Not applicable

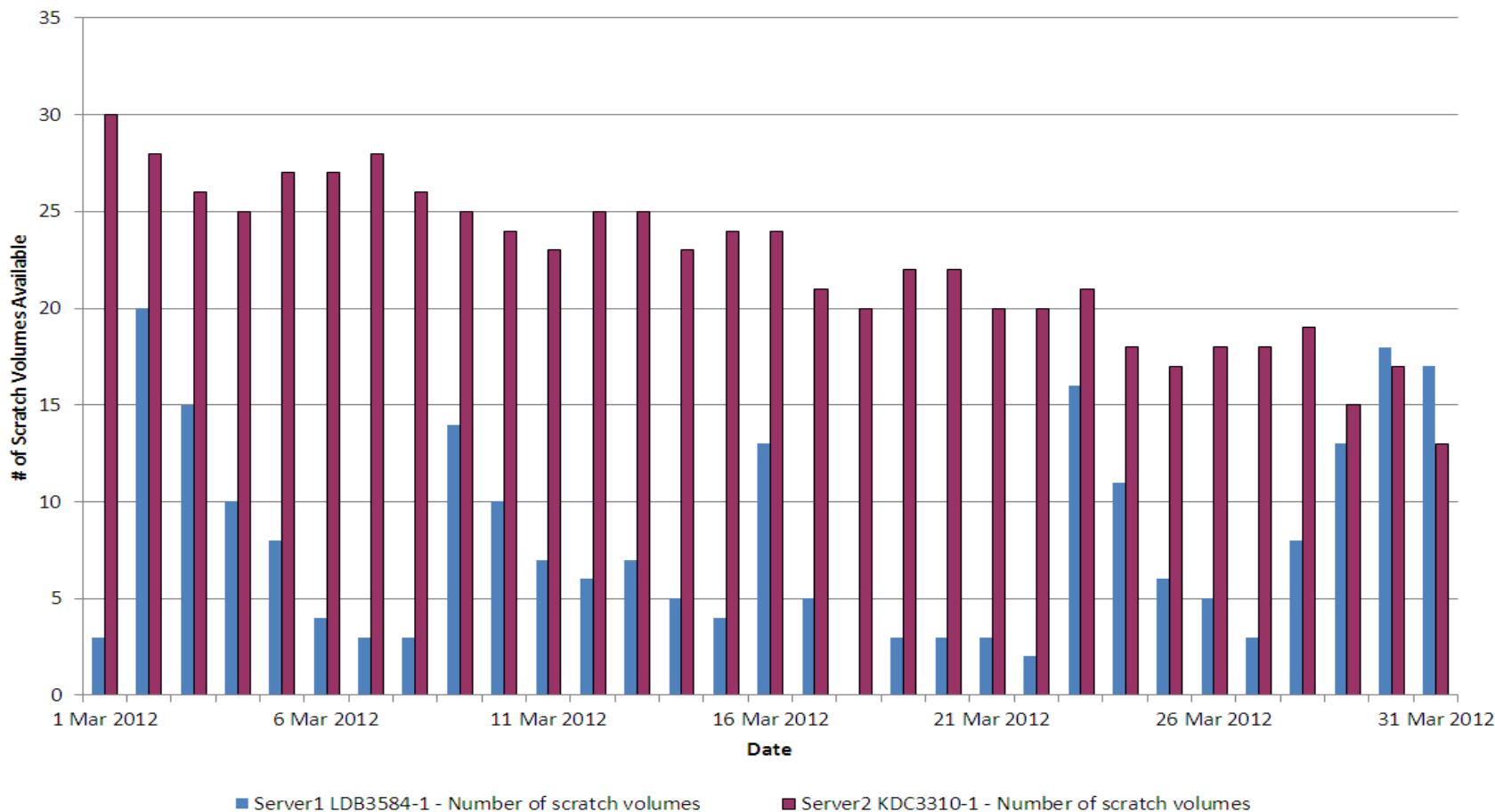# Total Schedule Success Rate – March 2012
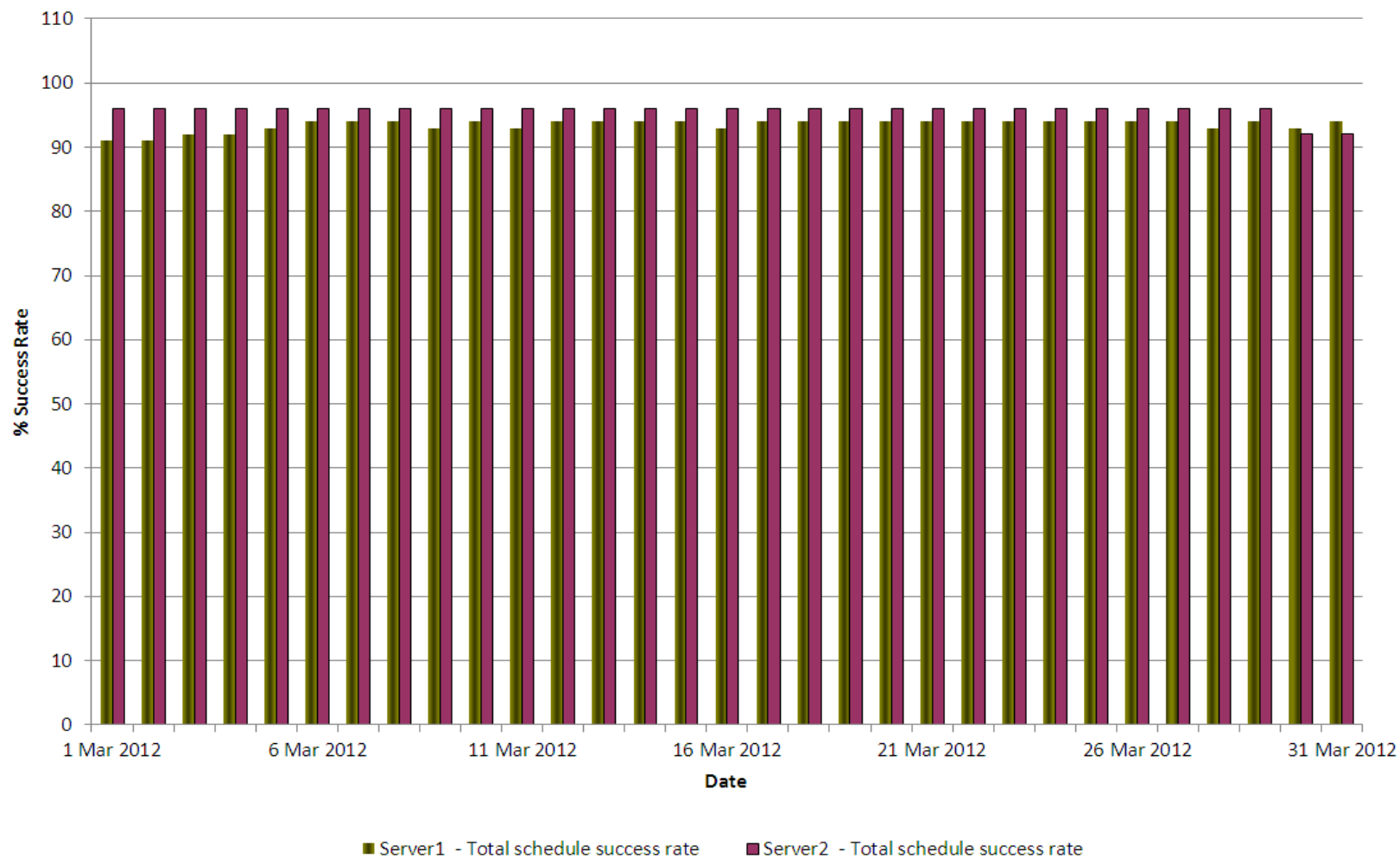
Summary: High level graphical view of TSM being successful in completing the backups on a daily basis for the month of March.

Observation: Continuing to work on the known client failures that are having problems.

Recommendation: Not applicable

Number of Total Scratch Volumes (available for use) – March 2012

Summary: High level graphical view of TSM tapes available for use in order to completing the backups on a daily basis for the month of March.
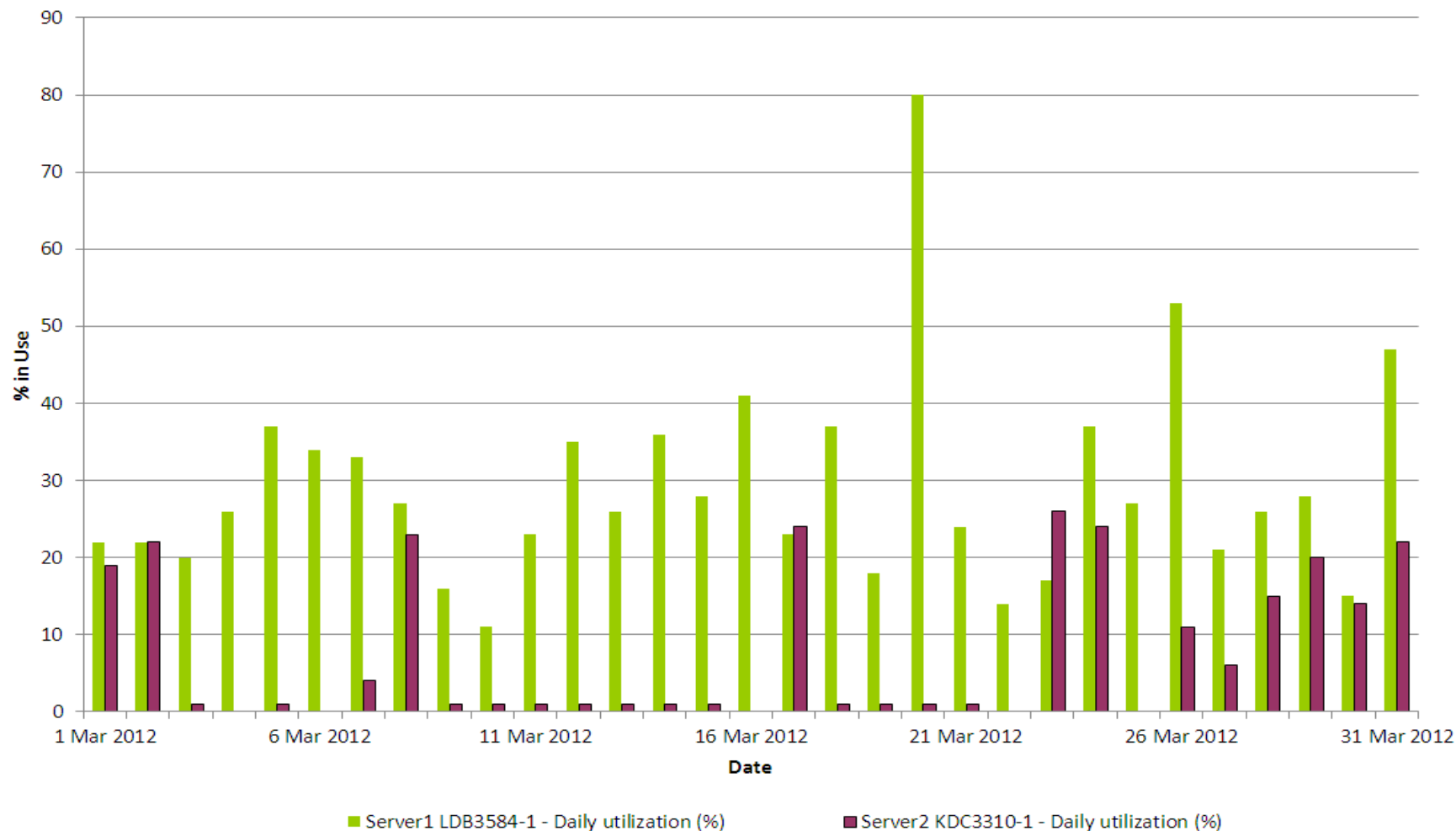
Observation: Each Weekend number of scratched tapes becomes available due to data being deleted by DBA's, data expiring or utilizing new tapes. (Note: data deleted by DBA's for Oracle databases backups on regular basis which are older than 40 days or expires).

Recommendation: Not applicable

Daily TSM Utilization (%) – March 2012

Summary: High level graphical view of TSM Tapes being mounted each day for the month of March.

Observation: March 16th - TSM is highly utilized as there was special restore being done.

Recommendation: Not applicable

End of Data Centre Chart Analysis

March 2012