Data Centre Chart Analysis

April 2012

Monthly VDC Bandwidth Graphs – April 2012

Internet Bandwidth – VDC


```
                    LDBVDC1 - Internet - Traffic - Gi0/0

     10 M
      8 M
      6 M
      4 M
      2 M
        0
           Week 14        Week 15        Week 16        Week 17

        From 2012/04/01 00:01:00 To 2012/04/30 23:59:00
```

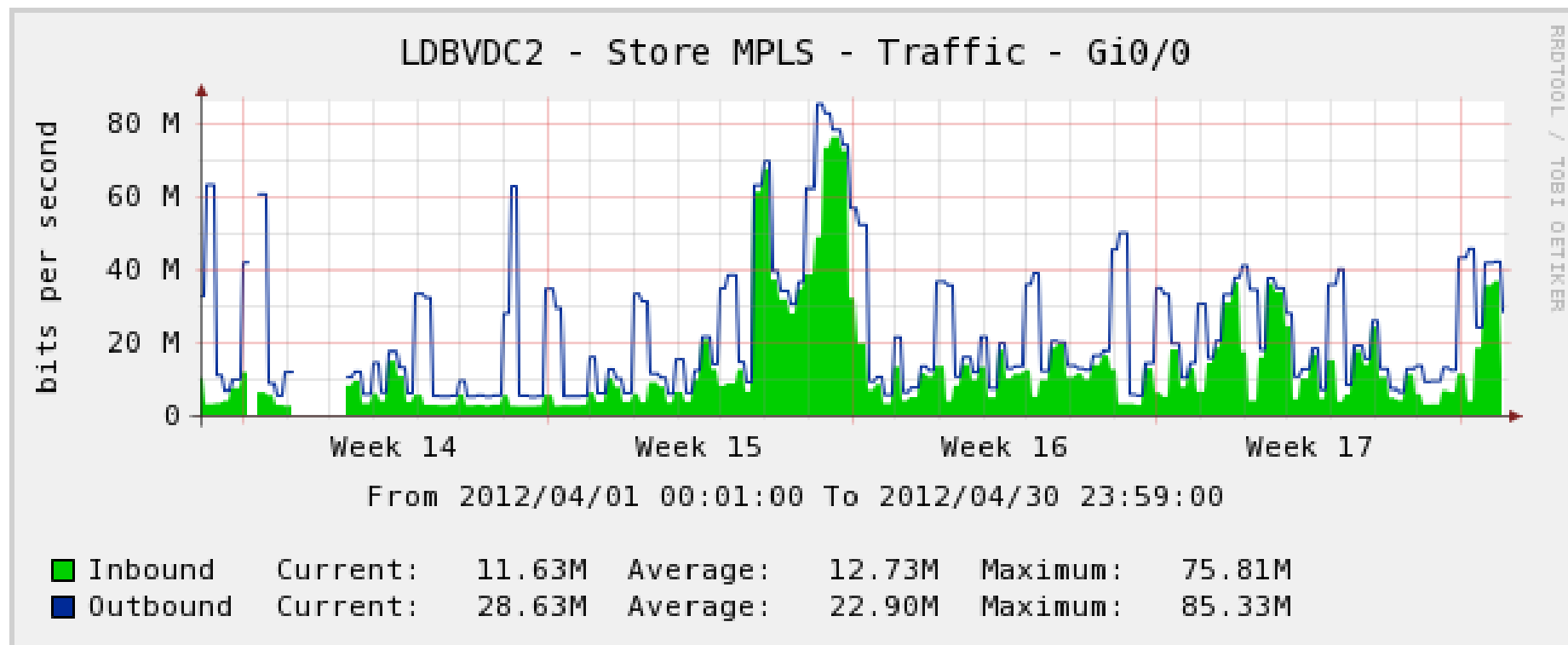|		Current:		Average:		Maximum:	
■ Inbound	Current:	2.20M	Average:	3.41M	Maximum:	10.17M
■ Outbound	Current:	126.02k	Average:	400.93k	Maximum:	1.73M
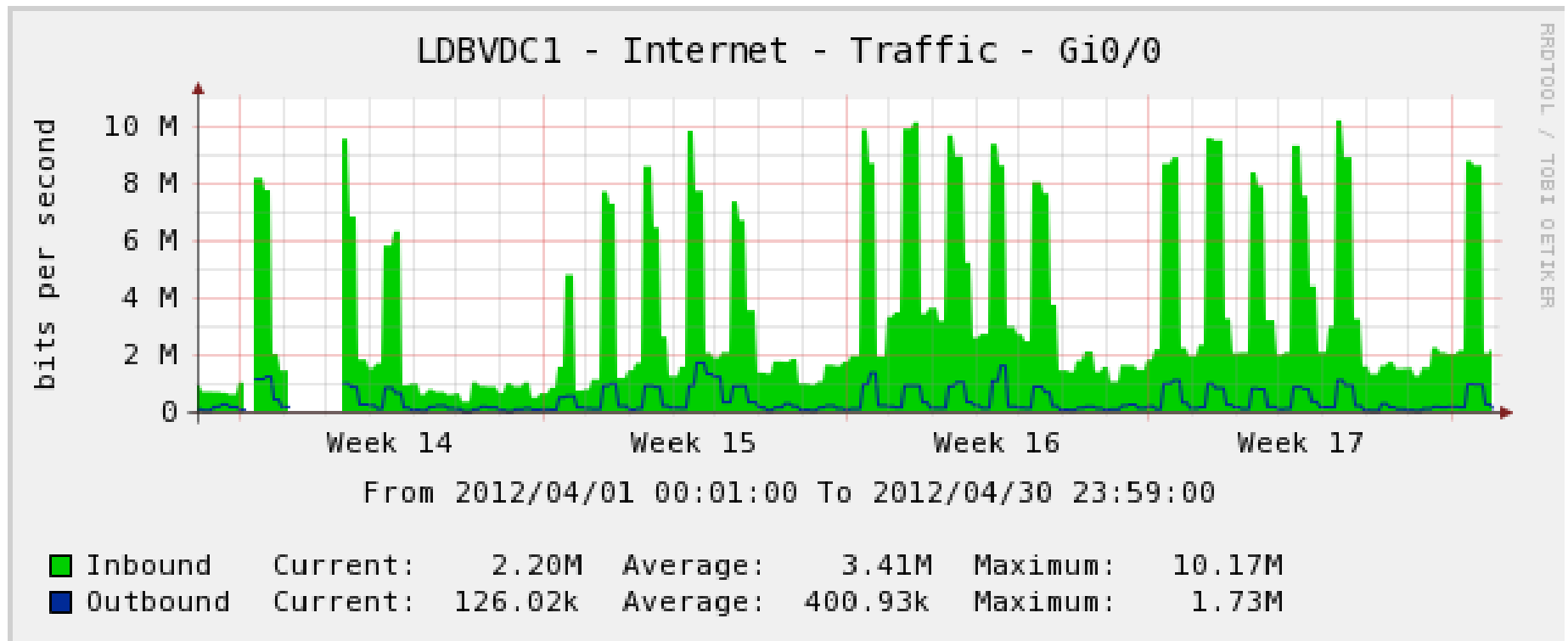
Summary: Graphical view of traffic going through Head Office to the Internet. The maximum traffic allowed is 20Mbs.

Observation: There was a SAN outage on April 2nd, ehence the gap in the first of April (BMC # 474678). During HO core hours (8:00 to 4:30), Internet link is highly utilize and sustained at 45% of the available bandwidth. Occasionally have seen the bandwidth reach 9 MB/ second.

Recommendation: N/A

Monthly VDC Bandwidth Graphs – April 2012
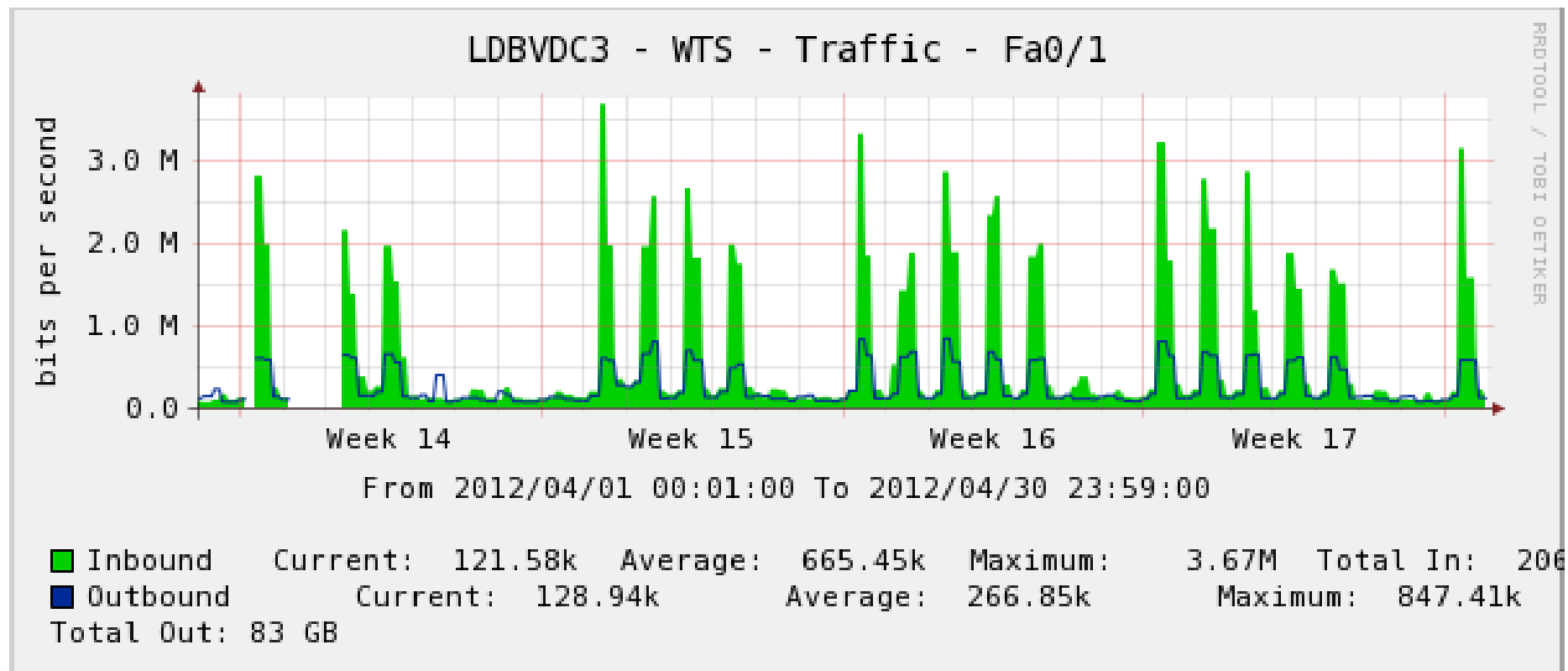
Bandwidth between HO and Stores

LDBVDC2 - Store MPLS - Traffic - Gi0/0

From 2012/04/01 00:01:00 To 2012/04/30 23:59:00

		Current:		Average:		Maximum:	
■	Inbound	11.63M		12.73M		75.81M	
■	Outbound	28.63M		22.90M		85.33M	

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

Observation: The middle of the month there is high utilization both ways due to store's orders catching up after the long weekend.

Recommendation: N/A

Monthly VDC Bandwidth Graphs – April 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 14   Week 15   Week 16   Week 17

From 2012/04/01 00:01:00 To 2012/04/30 23:59:00

■ Inbound   Current: 121.58k   Average: 665.45k   Maximum: 3.67M   Total In: 206
■ Outbound   Current: 128.94k   Average: 266.85k   Maximum: 847.41k
Total Out: 83 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 – April 2012
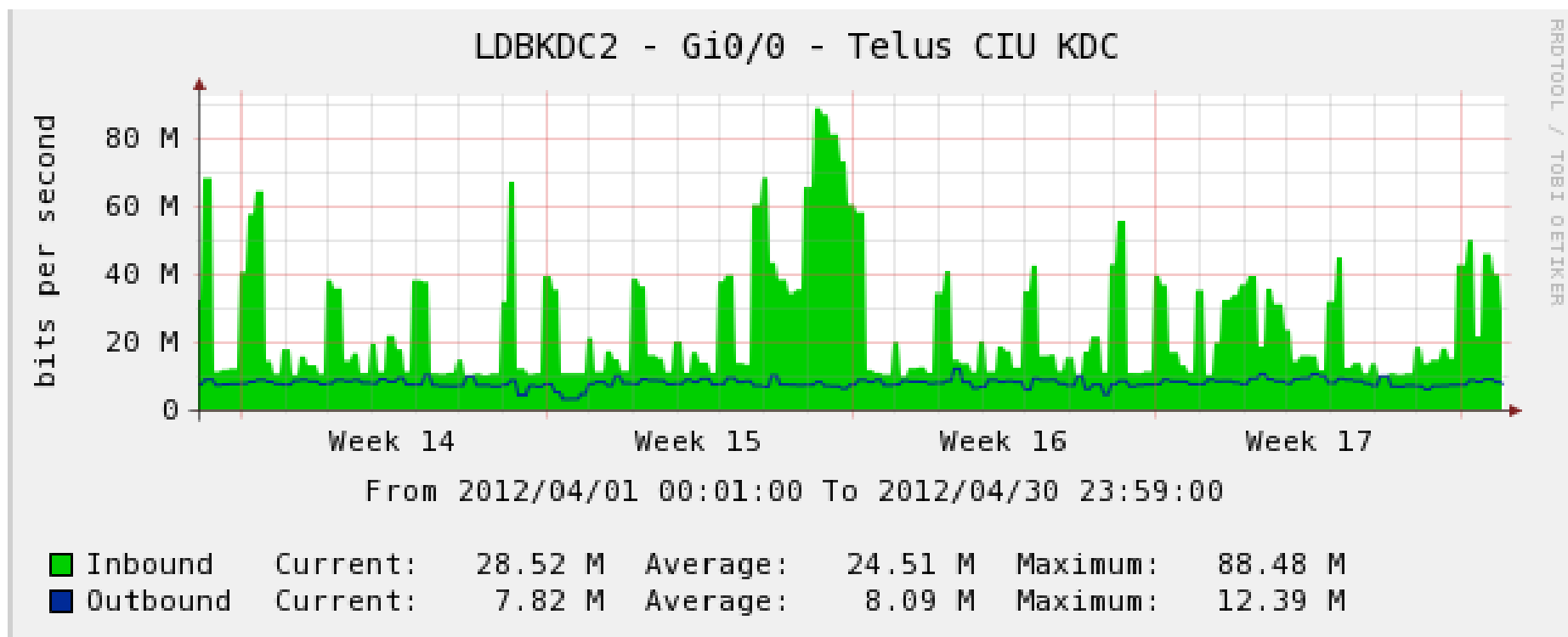
Internet Bandwidth – KDC
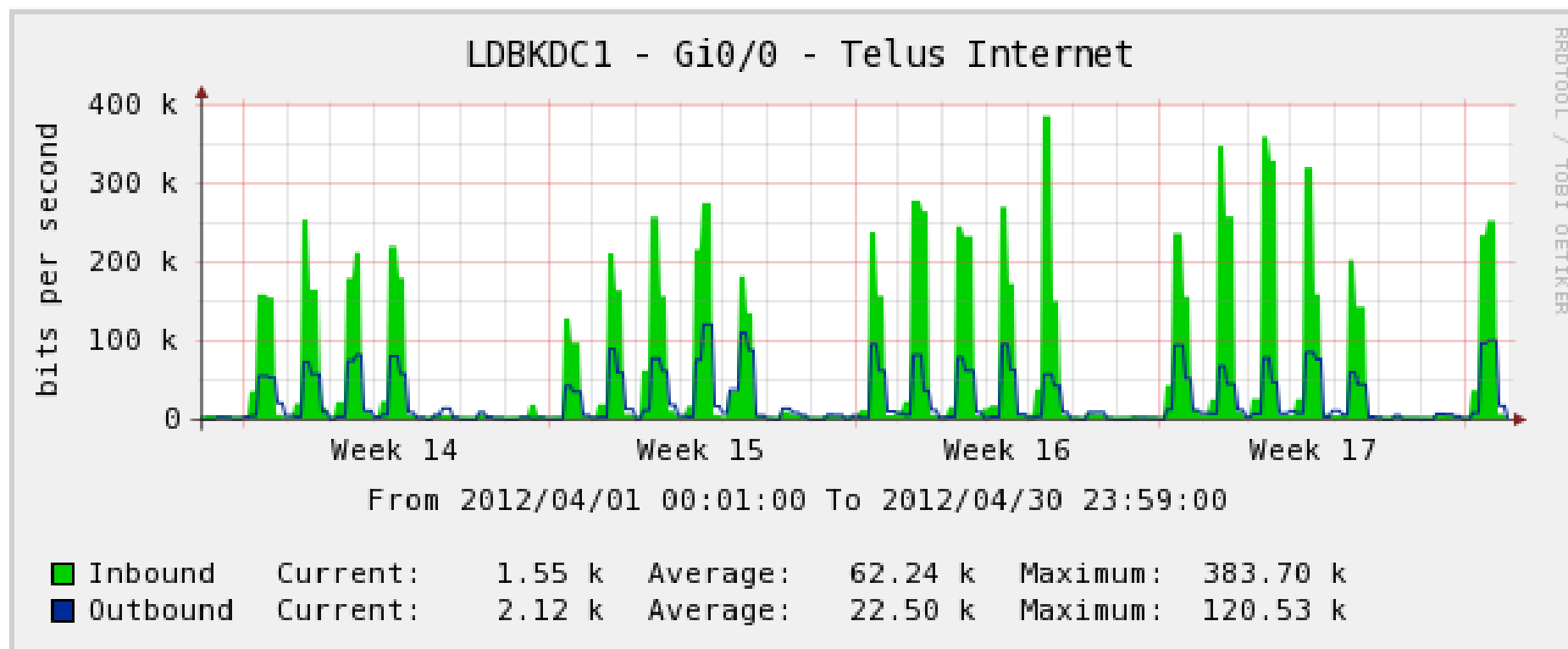
Summary: Graphical view of traffic going through KDC to the Internet.

Observation: Minimal use

Recommendation: N/A

Monthly KDC Bandwidth Graphs – April 2012

Bandwidth between KDC and Stores

LDBKDC2 - Gi0/0 - Telus CIU KDC

bits per second

From 2012/04/01 00:01:00 To 2012/04/30 23:59:00

		Current:		Average:		Maximum:	
■ Inbound	Current:	28.52 M	Average:	24.51 M	Maximum:	88.48 M
■ Outbound	Current:	7.82 M	Average:	8.09 M	Maximum:	12.39 M

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

Observation: High volume after the long weekend to catch up with Store orders

Recommendation: N/A

Monthly KDC Bandwidth Graphs – April 2012

Bandwidth used for Email, DNS, and KDC via WTS

	Current:	Average:	Maximum:
■ Inbound	22.02 k	26.77 k	57.64 k
■ Outbound	64.83 k	81.34 k	141.92 k
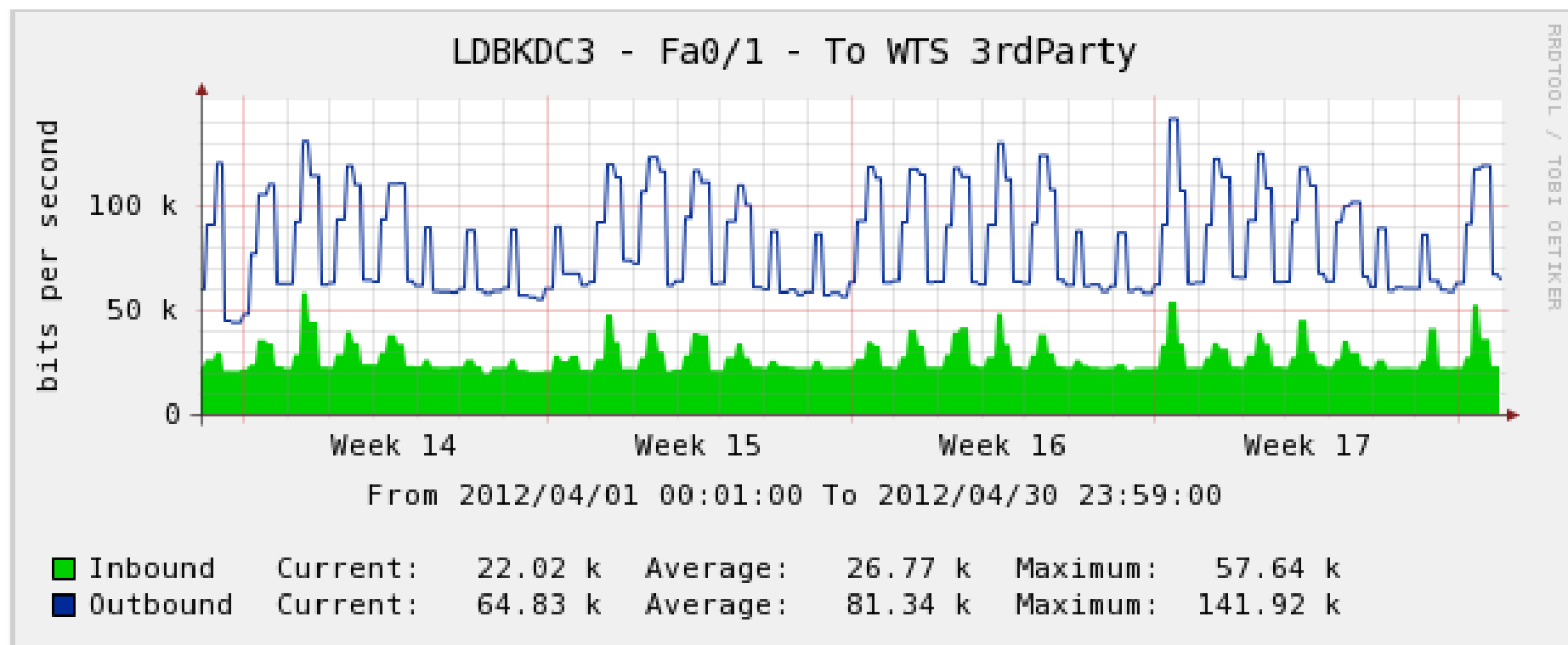
Summary: Graphical view of traffic going through KDC to WTS via Internet.

Observation: Minimal use

Recommendation: N/A

Data Centre Production Issues 2012

☐ Application ■ Enterprise ☐ Network ☐ Mid Range ■ Security

Total Issues Occurred in a month

100

80

60

40

20

0

January   February   March   April
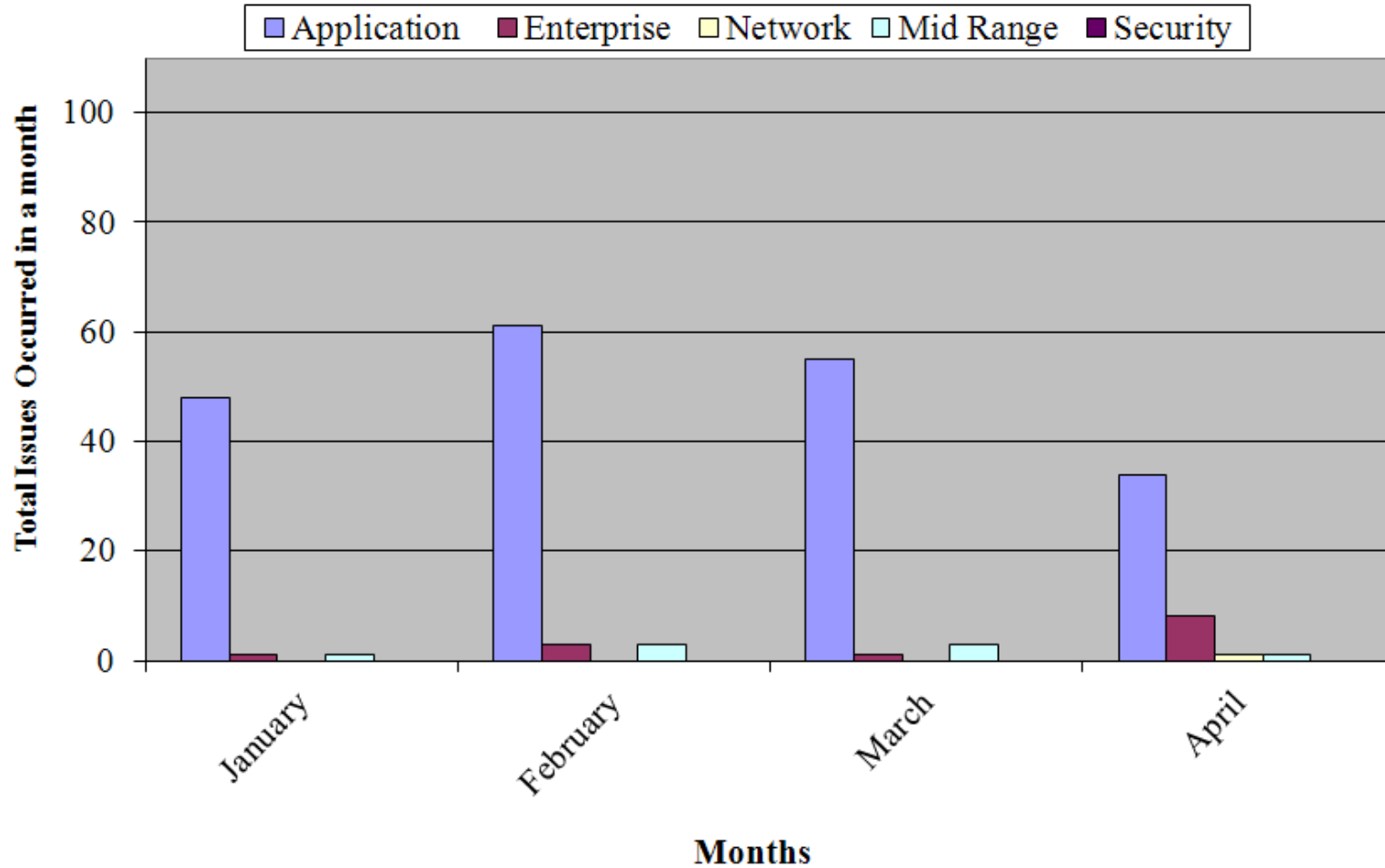
Months

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

Observation: Majority are application issues of which 59% are Autosys jobs and 13% are run away process (see BMC tickets for more information) for the month of April.

Recommendation: N/A

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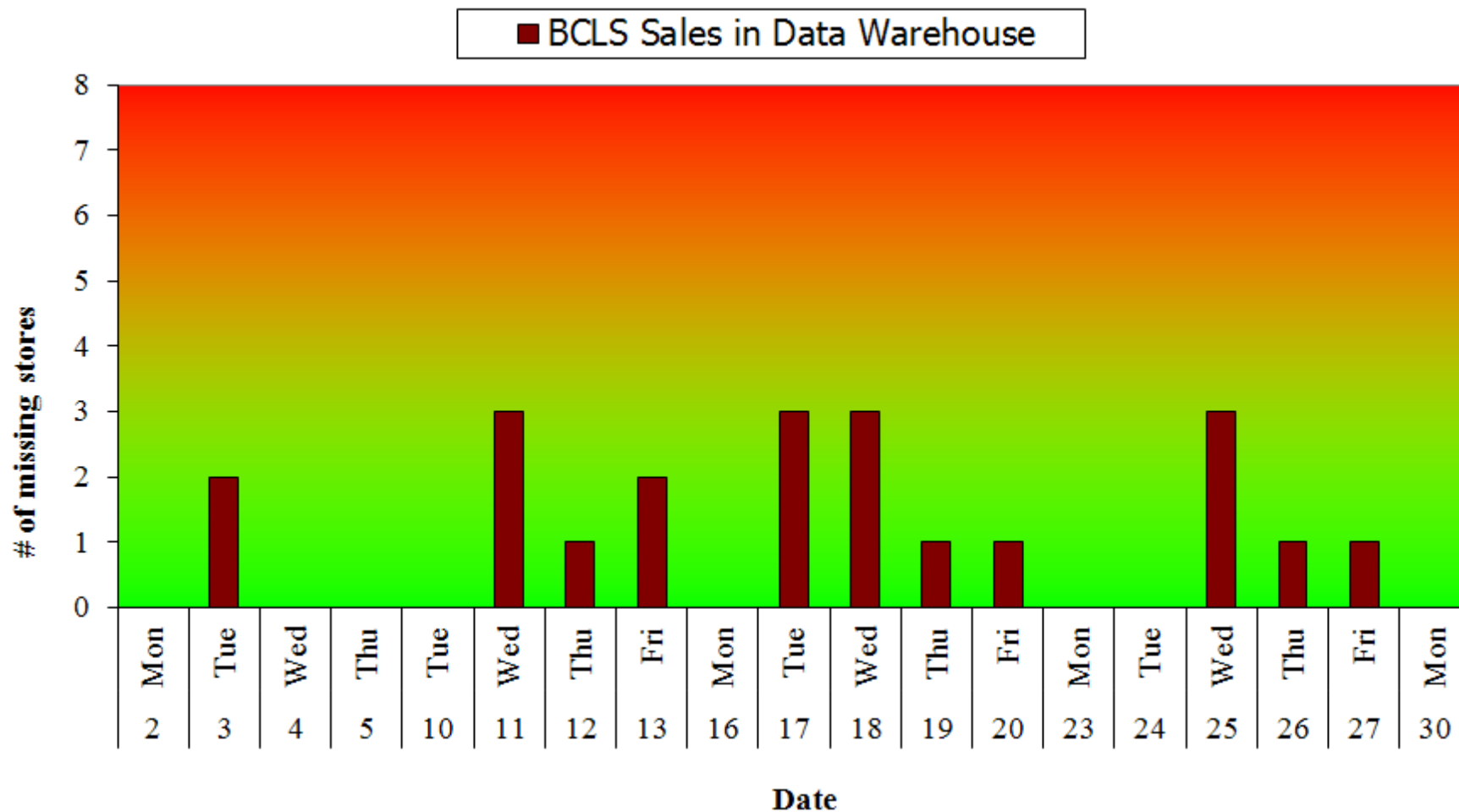
Summary: Graphical view of transmitted BCLS Stores Financial Sales Data to Head Office in Data Warehouse.

Observation: April was a month where Data Warehouse had no major issues relating to Sales Reporting.

Recommendation: N/A

# Daily Availability of Business Application – April 2012

Legend Summary

Red = Application not available or system not available

Yellow = Limited availablity of Application

Green = No Application issues
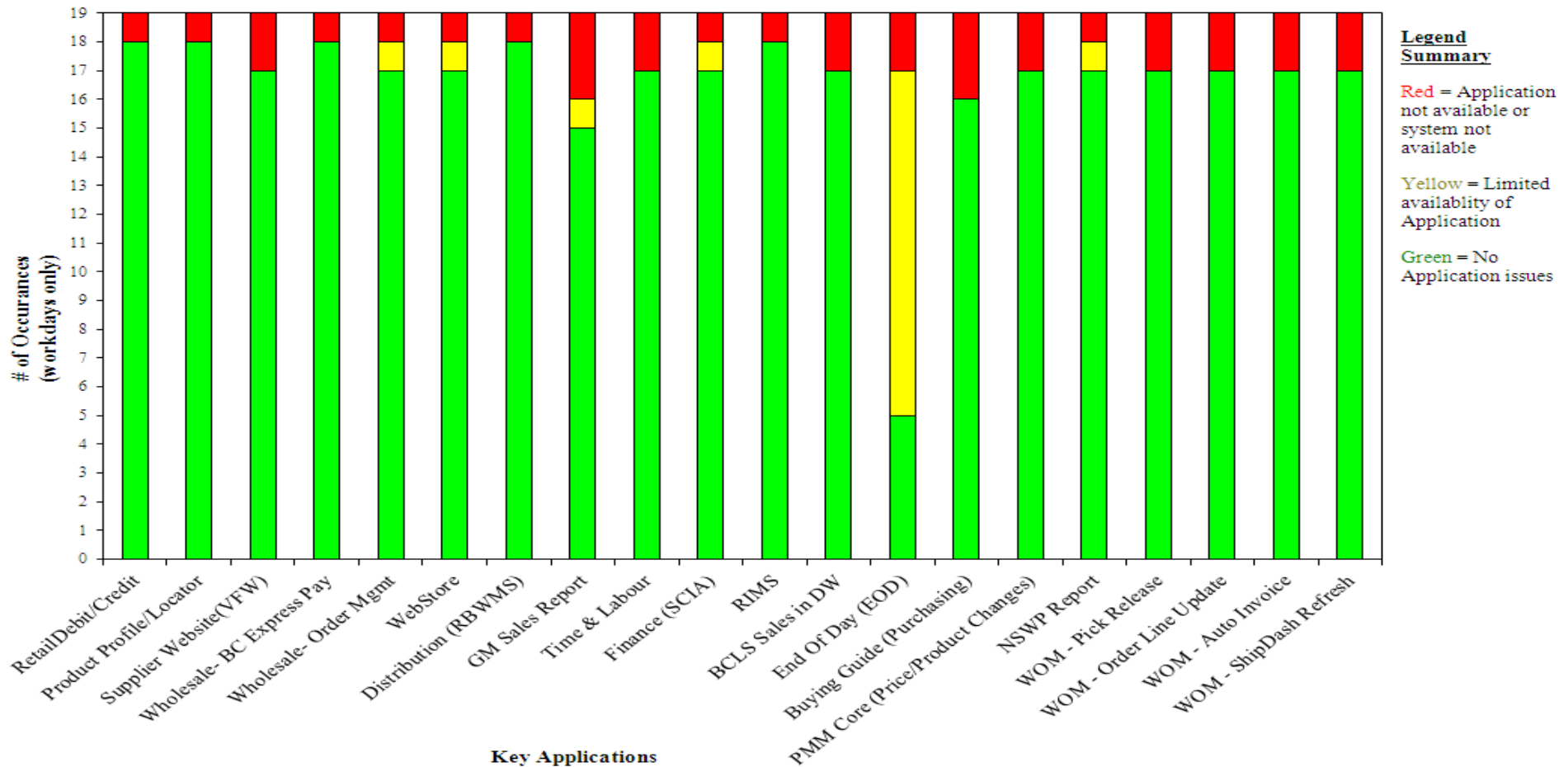
Summary: High level graphical view of Business Applications availability.

Observation: The beginning of April we had major outages due to SAN Storage and DHCP server and DNS issues. Please refer to BMC # 474678, 475619, and 475700 for details.

Recommendation: N/A

Autosys Jobs failed per day – April 2012
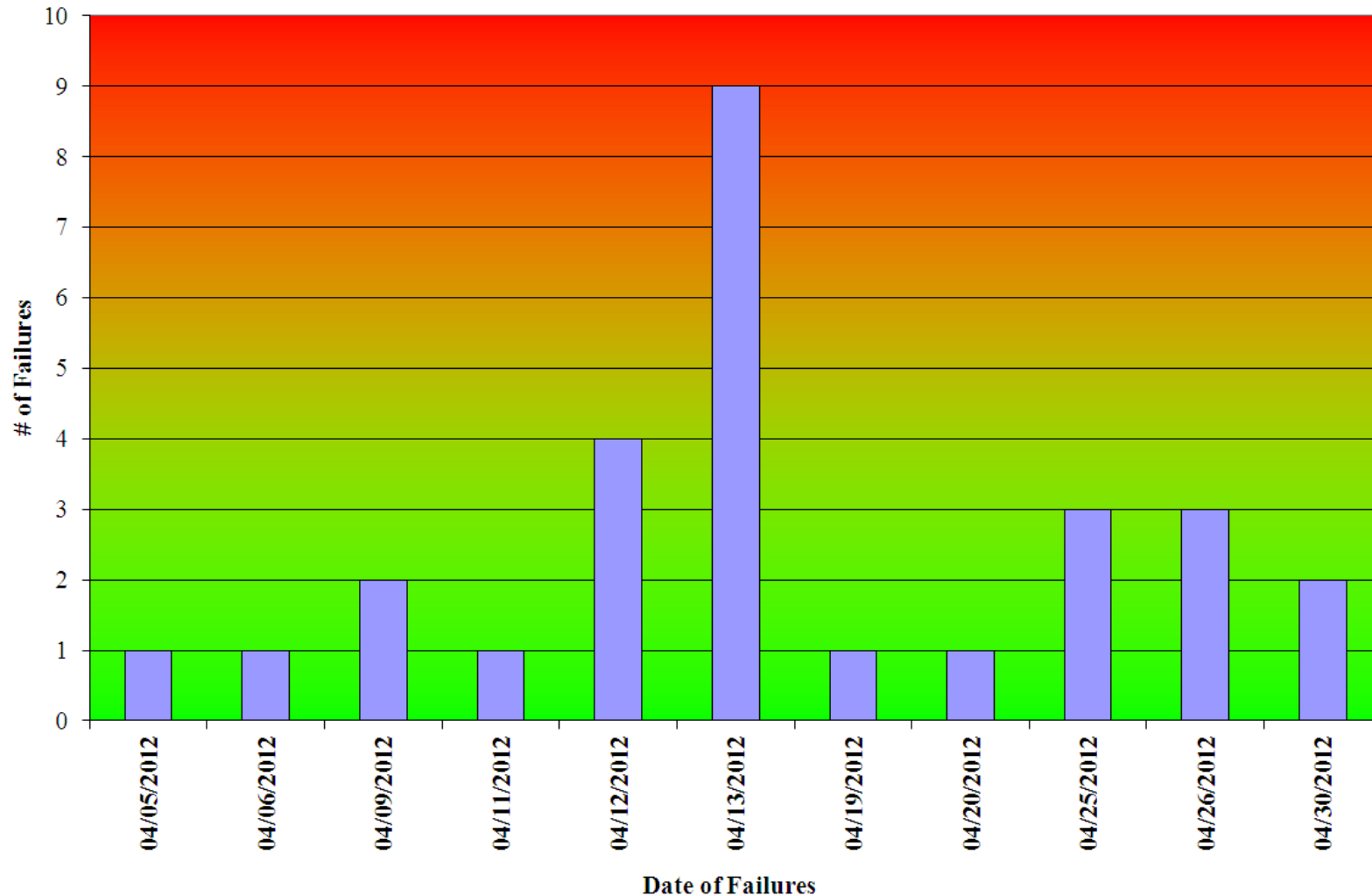
Summary: High level graphical view of Production Autosys Job failures for the month of April 2012.

Observation: April 13th – Various Autosys jobs failed on this day but it was because of major outage like in eairly April. Please refer to BMC # 476401, 476374, 476370, 476563 for details.

Recommendation: N/A

Remote Access on Weekday vs. Weekend – April 2012
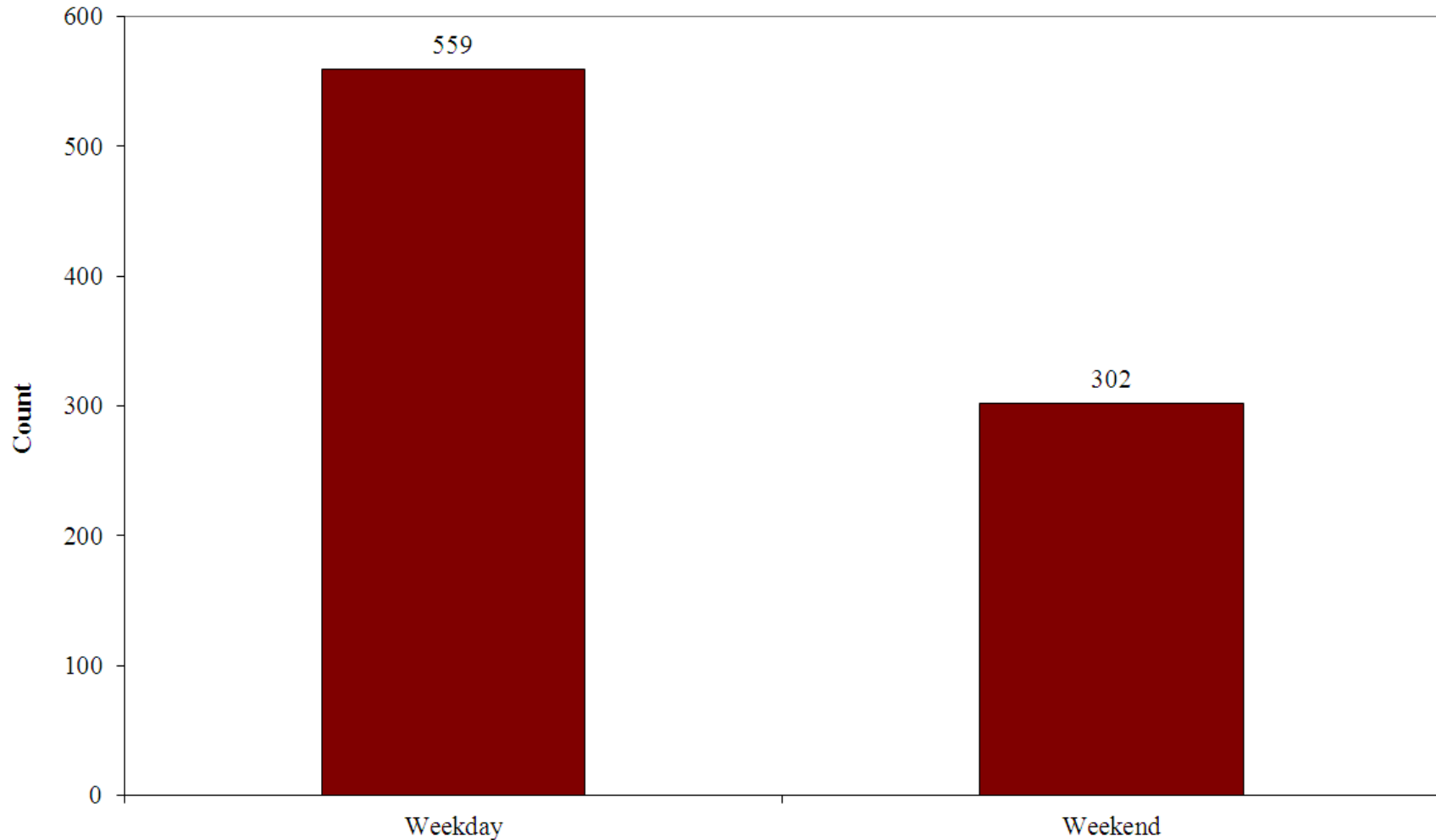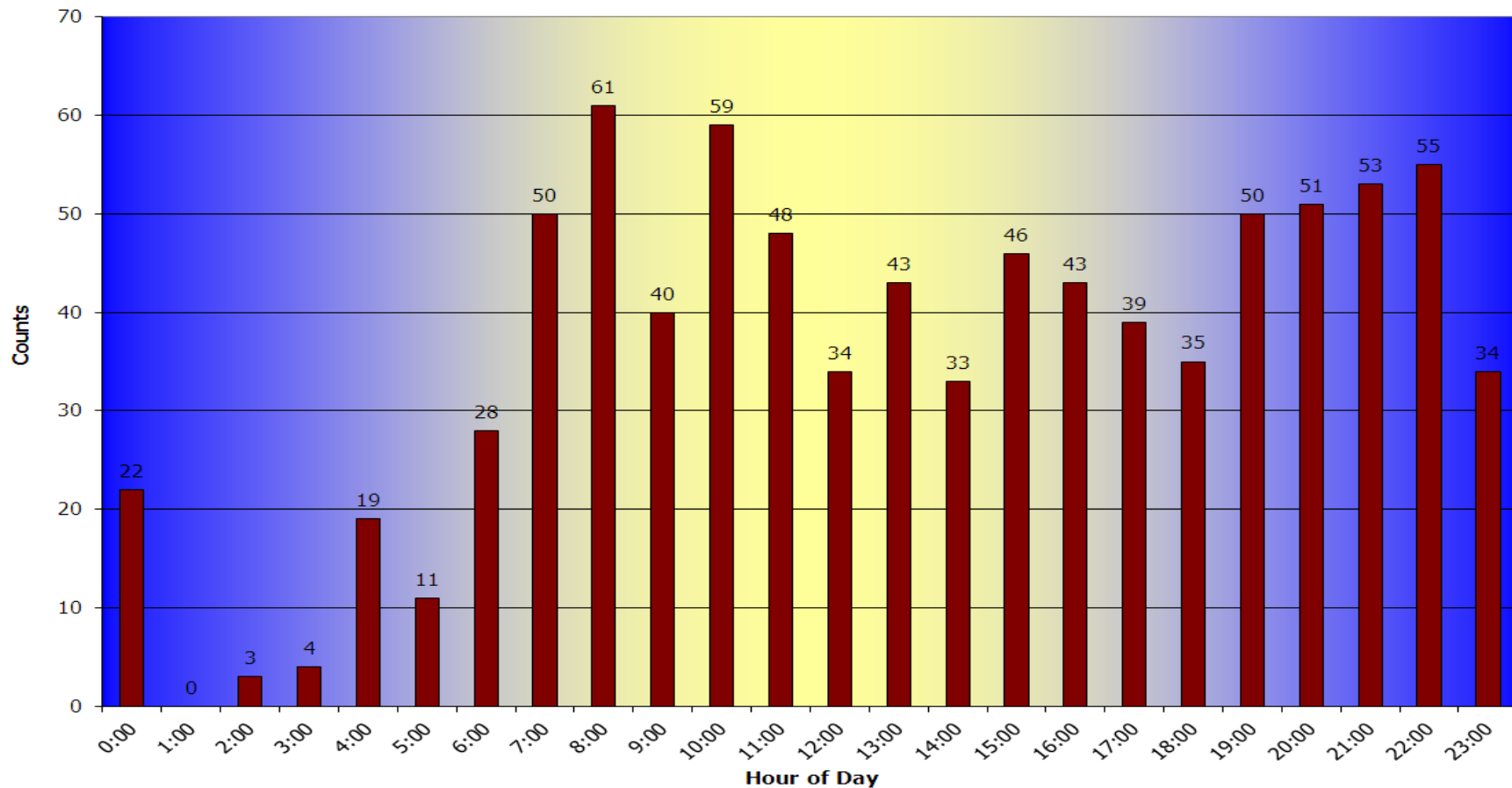

* Note: Weekends includes Stat holidays

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 majority was due to the outages experienced earlier in the month of April.

Recommendation: N/A

Remote Access by Hour of Day – April 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 April 2012.
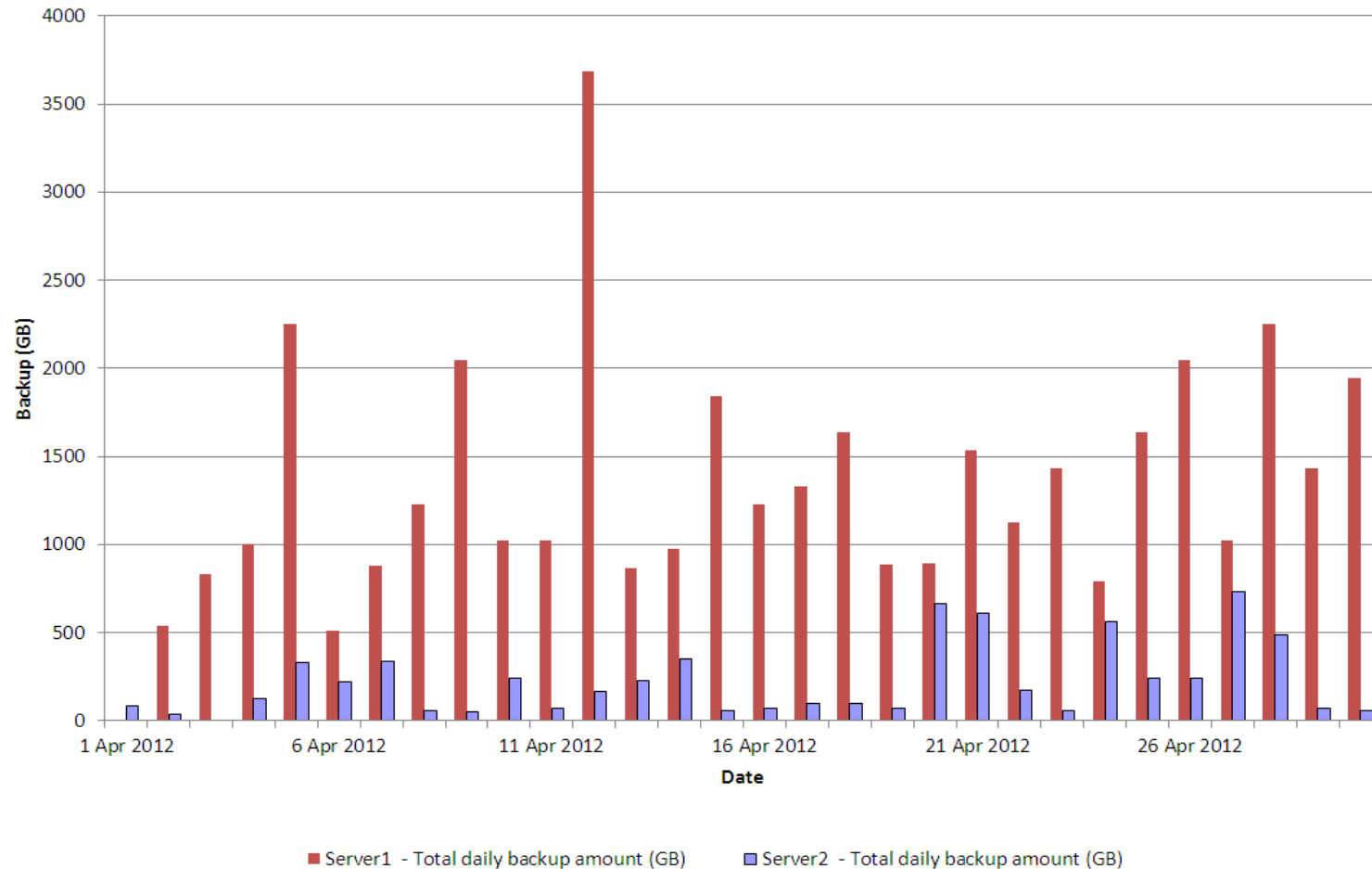
Observation: More people accessing Head Office resources in the morning (between 7am – 11am) and again in the afternoon thru to the late evening (3pm – 10pm). *** Note: Currently capacity for concurrent users is 50.

Recommendation: N/A

Total Daily Backup Amount (GB) – April 2012

Summary: High level graphical view graphical view of TSM Daily Backup for the month of April.
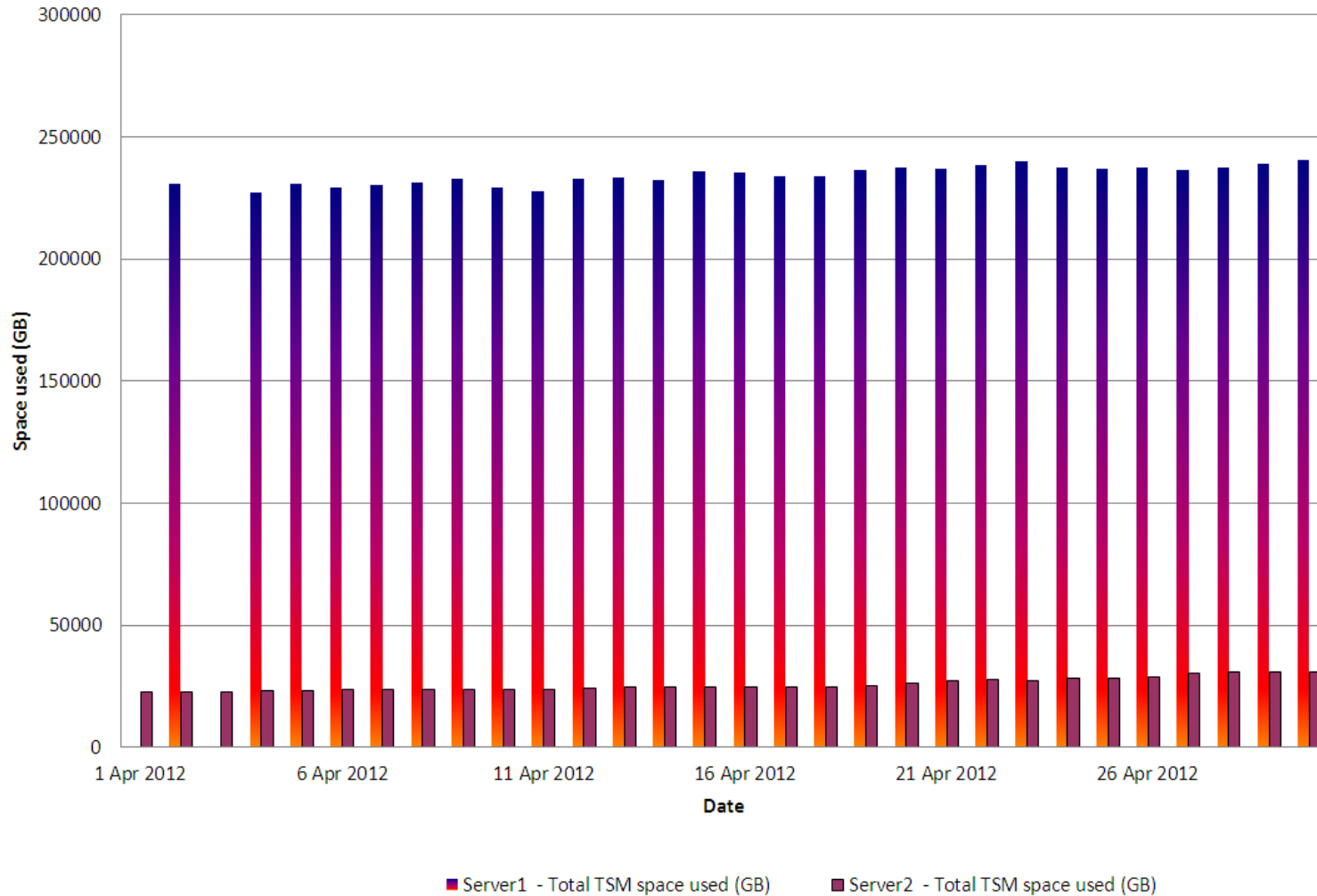
Observation: April 12th – 3.6TB of SAN storage data was backed up on TSM. 1.5TB of SAN storage as transitional data constantly increases/decreases as data is migrated to tape.

Recommendation: Not applicable

Total TSM Space Used (GB) – April 2012

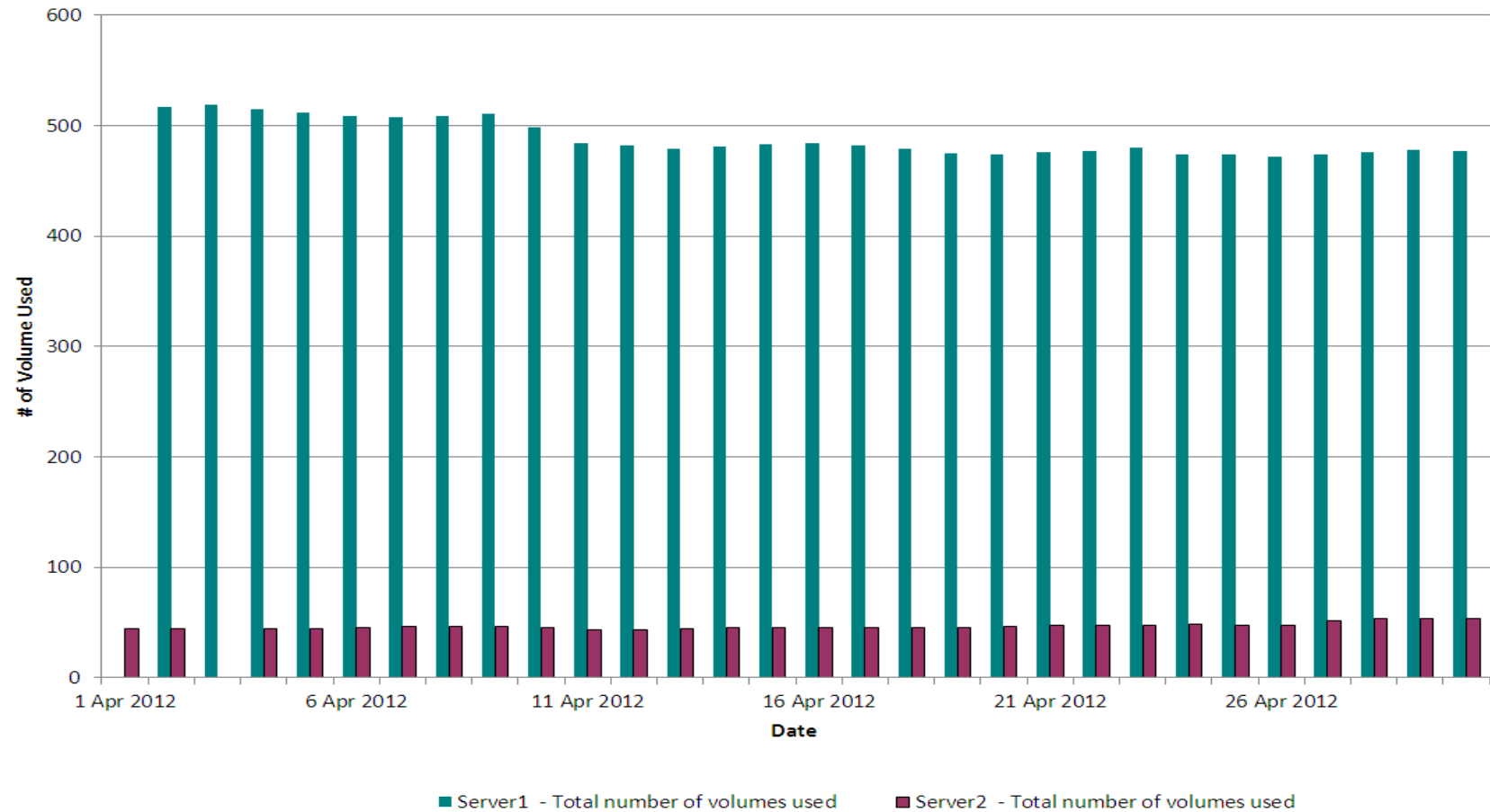**Summary:** High level graphical view of data stored on TSM per day for the month of April.

Observation: April 3rd – No backup due to the outage experienced – BMC # 474678, 475619, and 475700 for details.

Recommendation: Not applicable

Total Number of Volumes Used – April 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 April.

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 230 of them are in use. Vault capacity is infinite as we continue to order tapes as required.

Recommendation: Not applicable

Total Schedule Success Rate – April 2012
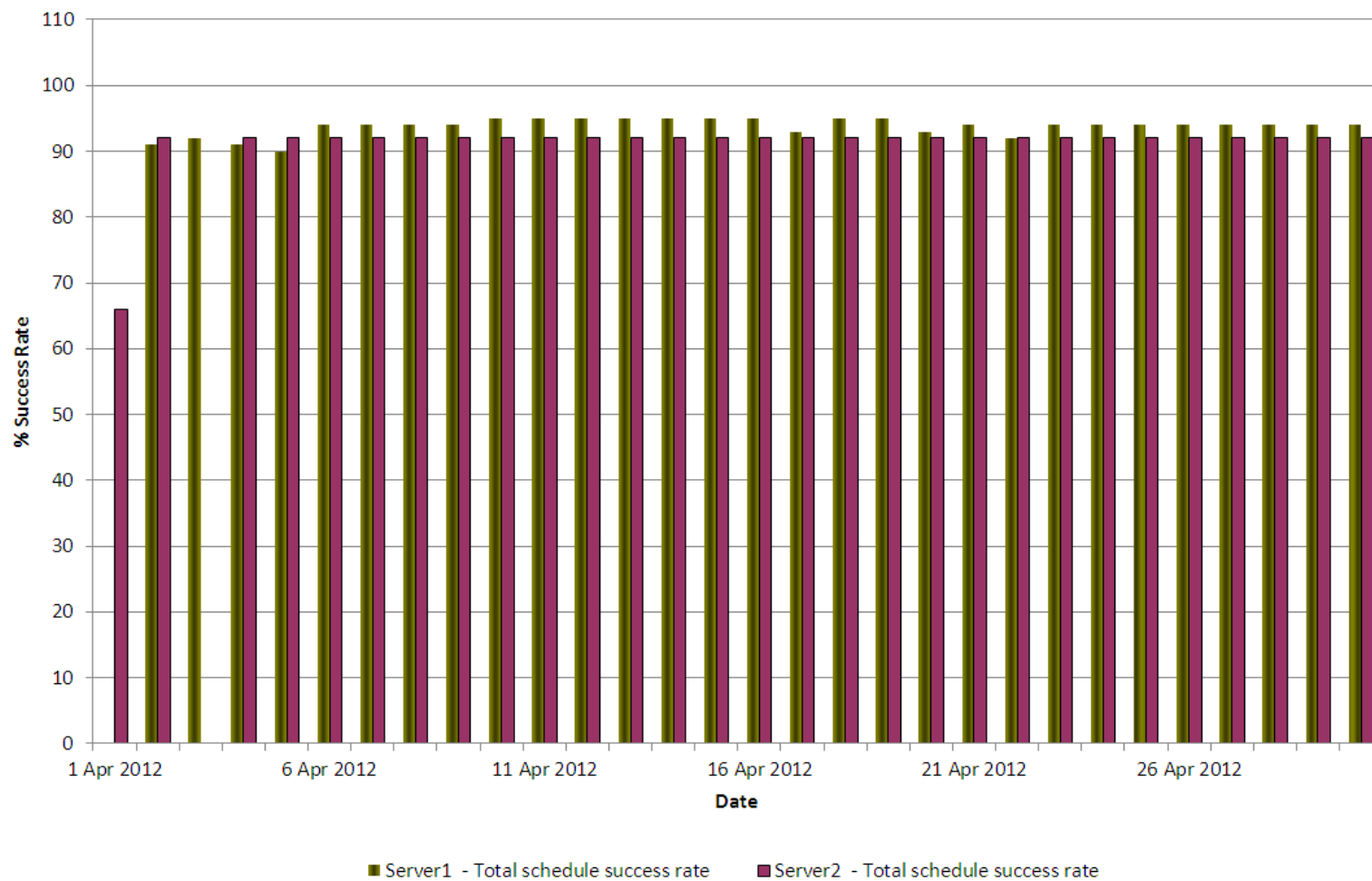
Summary: High level graphical view of TSM being successful in completing the backups on a daily basis for the month of April.
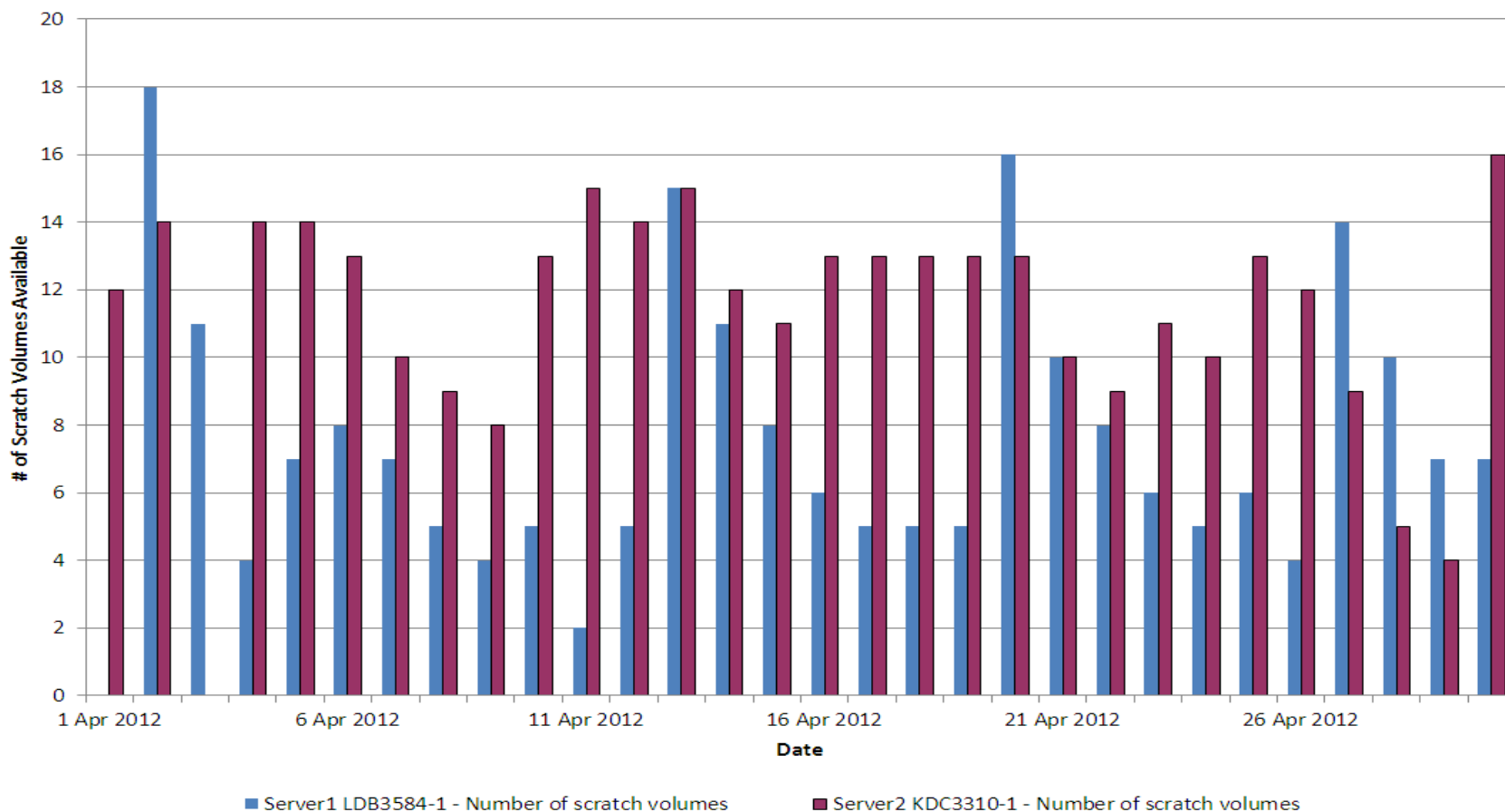
Observation: Continuing to work on the known client failures that are having problems. Early April the success rate is low for the VDC TSM due to the outage.

Recommendation: Not applicable

Number of Total Scratch Volumes (available for use) – April 2011

Summary: High level graphical view of TSM being successful in completing the backups on a daily basis for the month of April.

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 (%) – April 2011

Legend: ■ Server1 LDB3584-1 - Daily utilization (%)   ■ Server2 KDC3310-1 - Daily utilization (%)
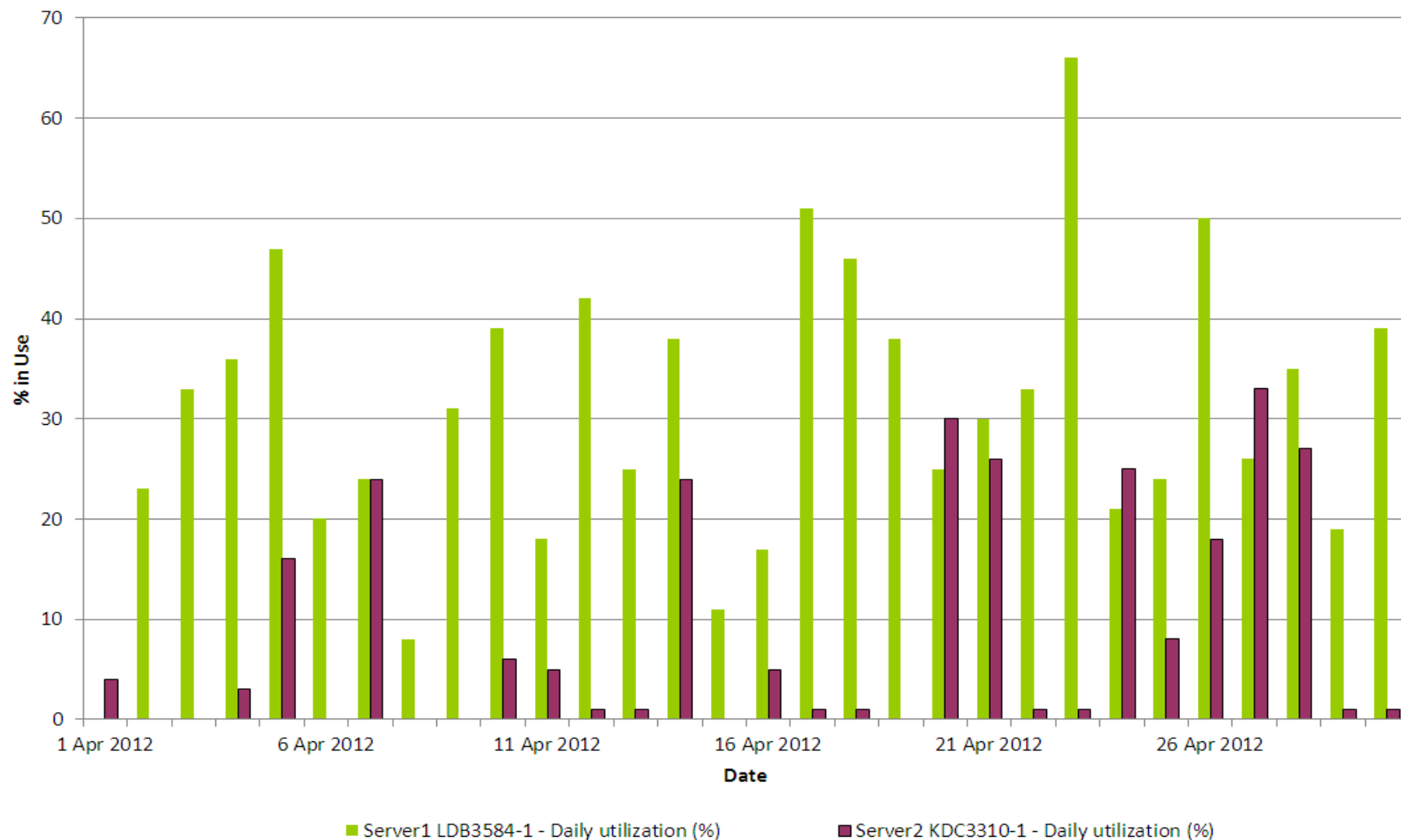
Summary: High level graphical view of TSM Tapes being mounted each day for the month of April.

Observation: TSM is highly utilized on the weekends. TSM for VDC is more utilized for daily backups versus TSM for KDC.

Recommendation: Not applicable

End of Data Centre Chart Analysis

April 2012