

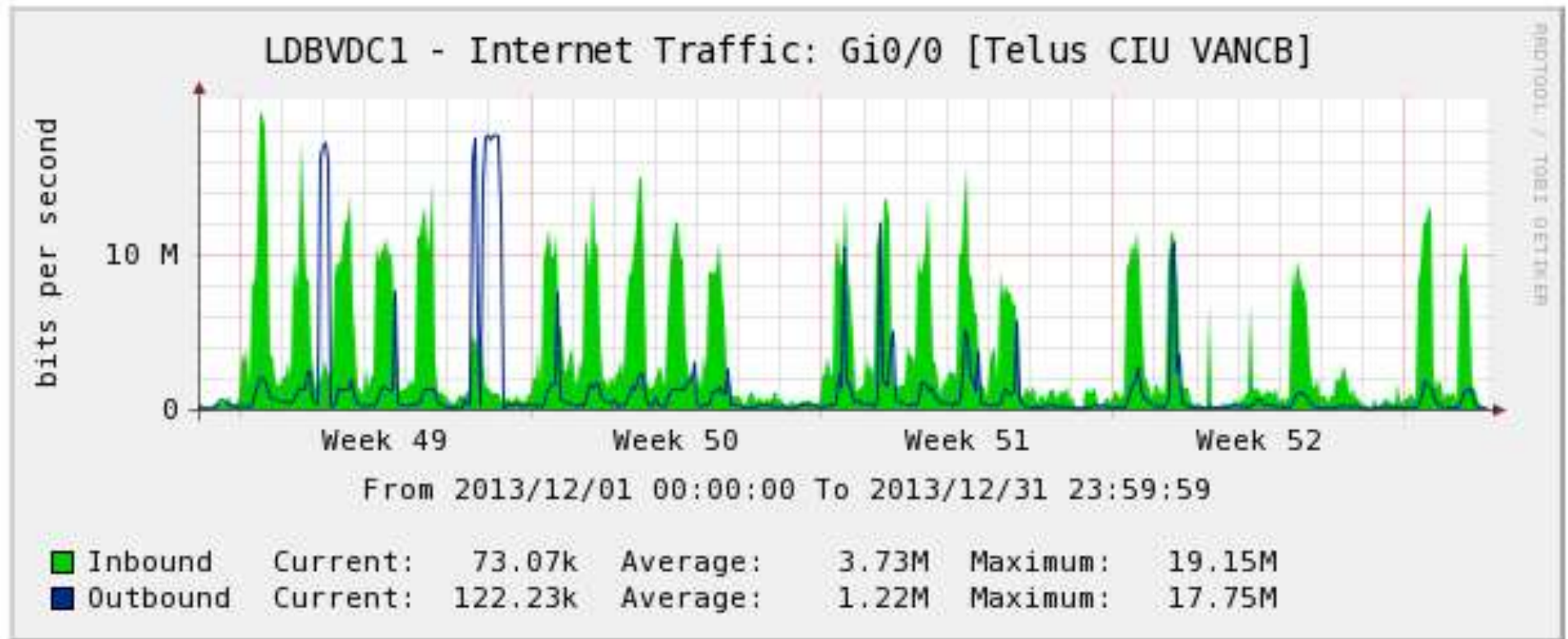
# Data Centre Chart Analysis

December 2013



## Monthly Vancouver, Head Office Internet Gateway- December 2013

For Webstore, Vendor Facing Website, WEB Browsing and other external business communications



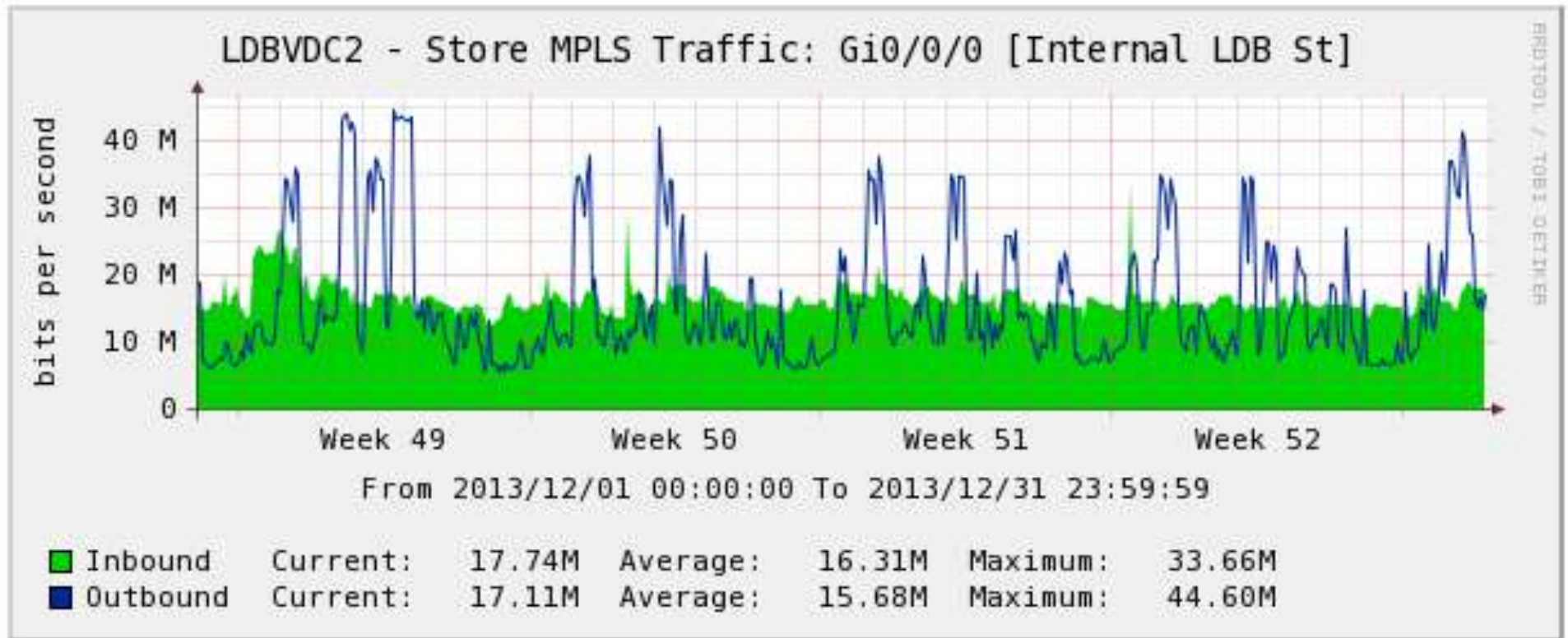
**Summary:** Graphical view of Head Office Internet data communications. The maximum capacity is 20Mbps.

**Observation:** During HO core hours (8:00 to 4:30), Internet Gateway operating as expected- 6Mbps download and 1Mbps upload average.

**Recommendation:** Not applicable

## Monthly Vancouver, Head Office Private Network Gateway – December 2013

**For Stores Electronic Notifications, Price Changes, EOD Sales Data and Communications between Vancouver & Kamloops Data Centres**



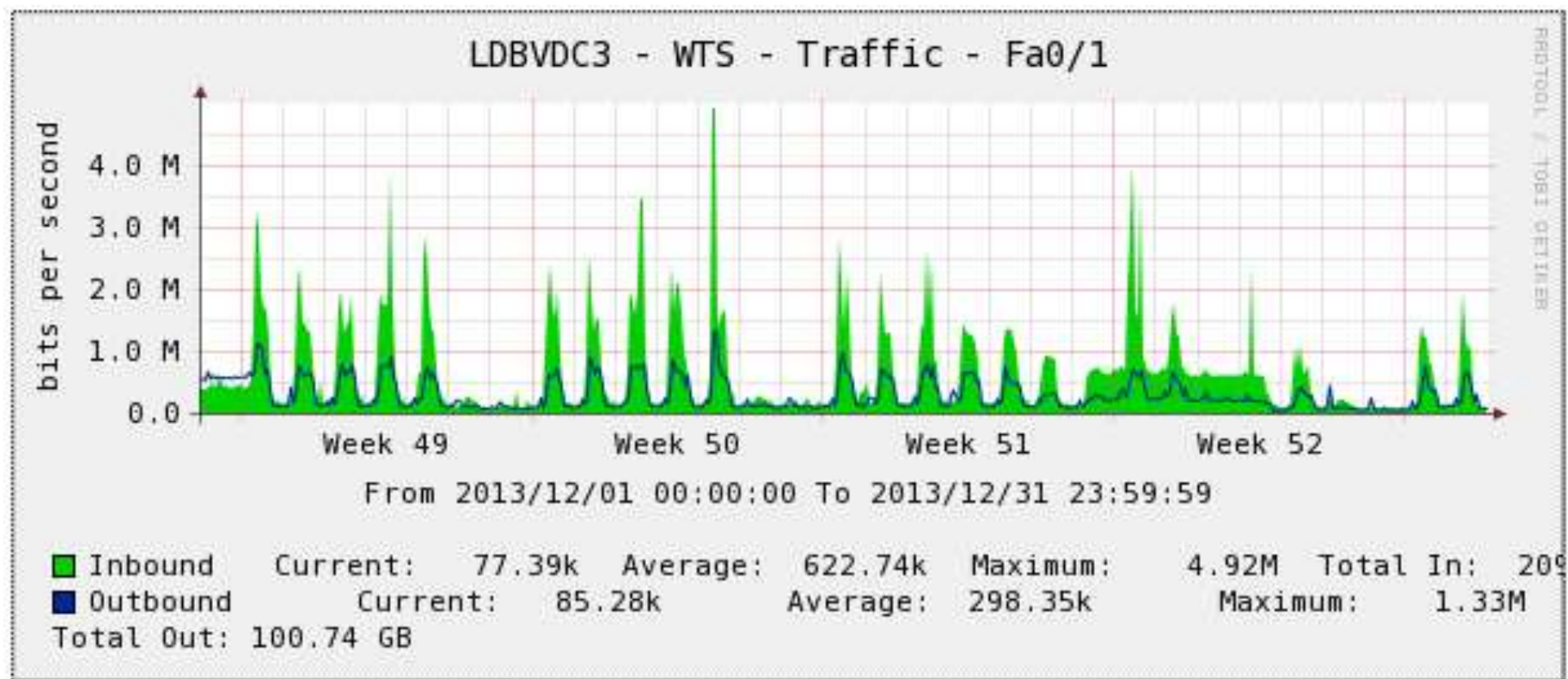
**Summary:** Graphical view of Head Office, Kamloops Distribution and Stores data communications. The maximum capacity is 100 Mbps.

**Observation:** During HO core hours (8:00 to 4:30), Private Network Internet Gateway operating as expected.

**Recommendation:** Not applicable

## Monthly Vancouver, Head Office to Provincial Government Network Gateway – December 2013

For Corporate and Stores Email and Government websites communications



**Summary:** Graphical view of Head Office and Provincial government data communications. The maximum capacity is 10 Mbps.

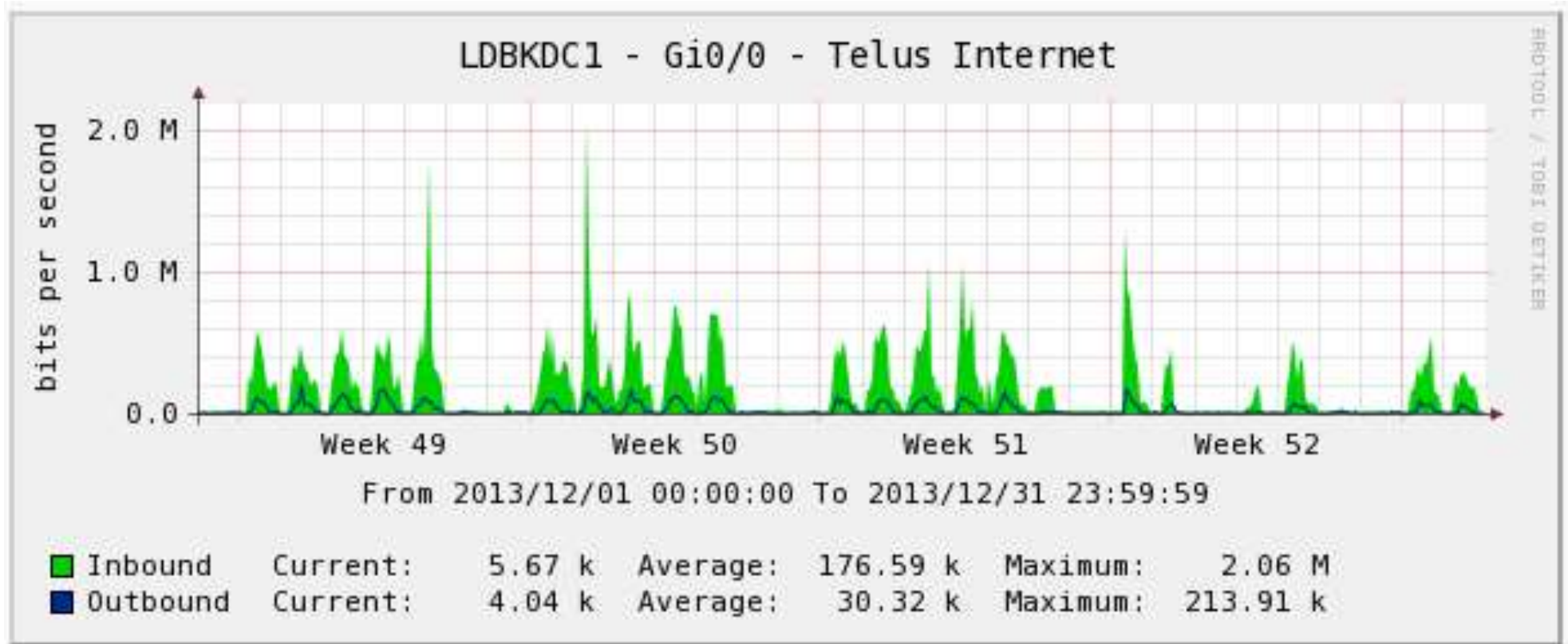
**Observation:** Network utilization of the service above is deemed working within normal parameters.

**Recommendation:** Not applicable



## Monthly Kamloops, Distribution Internet Gateway- December 2013

For WEB Browsing and other external business communications



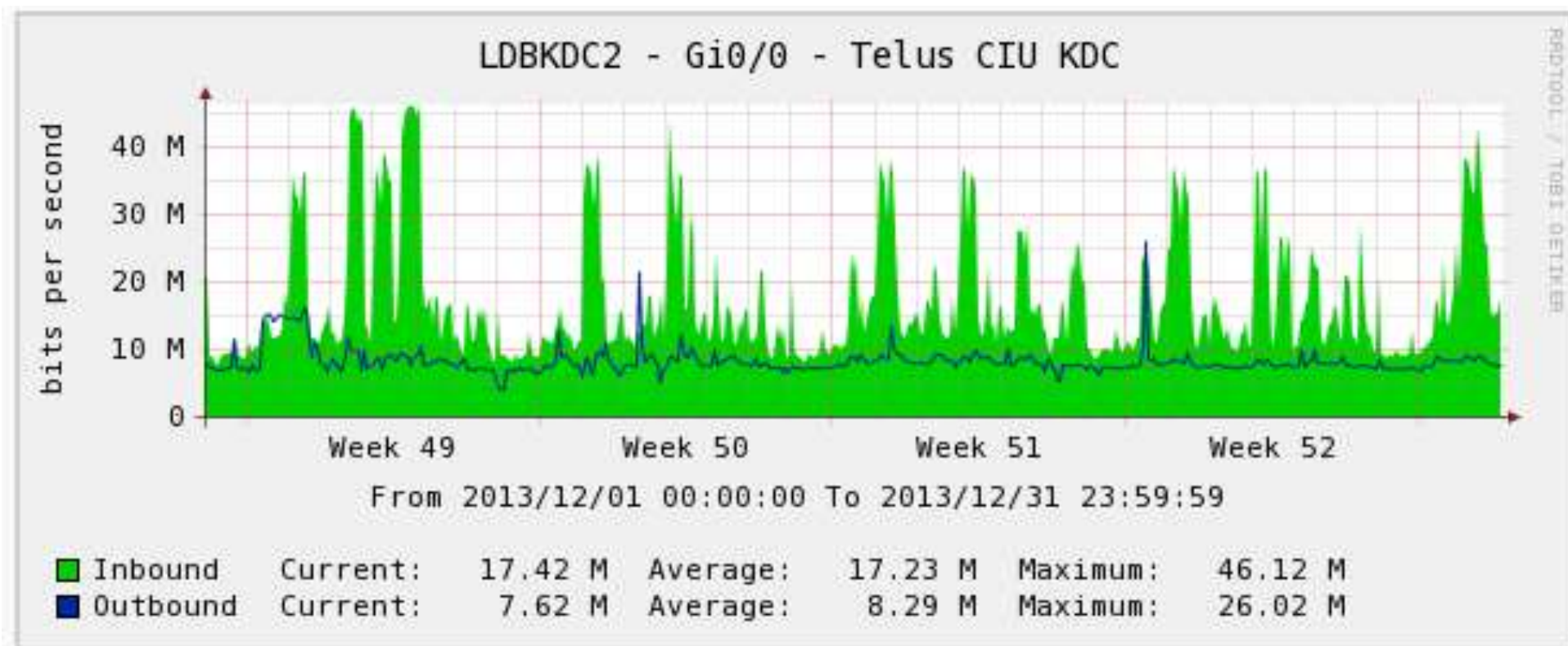
**Summary:** Graphical view of Kamloops Distribution Internet data communications. The maximum capacity is 10Mbps.

**Observation:** Minimal use. Can be leveraged for internet facing business requirements such as Lottery transactions

**Recommendation:** Not applicable

## Monthly Kamloops, Distribution Private Network Gateway – December 2013

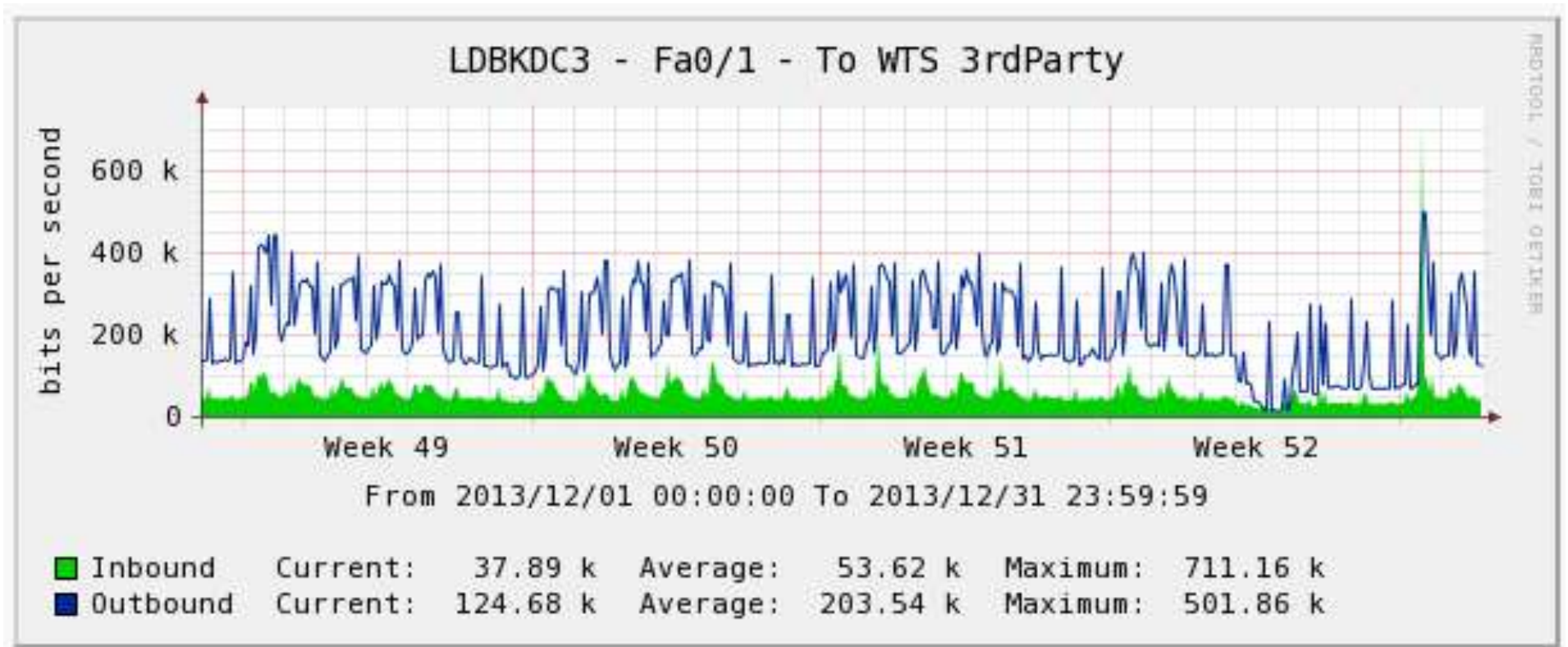
For Vancouver & Kamloops Data Centres communications and Store remote management



- Summary:** Graphical view of Head Office, Kamloops Distribution and Stores data communications. The maximum capacity is 100 Mbps.
- Observation:** Network utilization of the service above is deemed working within normal parameters.
- Recommendation:** Not applicable

## Monthly Kamloops, Distribution to Provincial Government Network Gateway – December 2013

For Corporate and Stores Email and Government websites communications



- Summary:** Graphical view of Kamloops, Distribution and Provincial government data communications. The maximum capacity is 10 Mbps.
- Observation:** Minimal use
- Recommendation:** Not applicable


















# VDC WAN Optimized Traffic Summary - December 2013



Period: (Custom)   
 Type: Optimized   
 Traffic: Bi-Directional   
 Refresh: Off

Start Time:  
 2013/12/01 00:00:00

End Time:  
 2014/01/01 00:00:00

	Port	Reduction	LAN Data	WAN Data	Traffic %
	Total Optimized Traffic	 (54.17%)	6112.8 GB	2801.5 GB	--
	902 (VMware ESXi)	 (64.37%)	1999.7 GB	712.5 GB	32.71%
	1521 (Oracle Database)	 (71.96%)	1426.1 GB	399.8 GB	23.33%
	9002 (Pelco DVR)	 (0.00%)	907.4 GB	916.1 GB	14.84%
	1522 (Oracle Database)	 (75.29%)	729.4 GB	180.2 GB	11.93%
	8779 (Windows Server File Transfer)	 (76.43%)	229.8 GB	49.6 GB	3.76%
	18184 (CheckPoint FW)	 (0.00%)	204.6 GB	210.0 GB	3.35%
	1433 (SQL Database)	 (65.65%)	110.0 GB	37.8 GB	1.80%
	445 (Windows Server File Transfer)	 (71.64%)	80.1 GB	22.7 GB	1.31%
	80 (Web Traffic)	 (68.93%)	72.3 GB	22.5 GB	1.18%
	1524 (Oracle Database)	 (0.00%)	60.8 GB	71.8 GB	0.99%
	8014 (Symantec Endpoint Protection)	 (93.11%)	54.4 GB	3838.8 MB	0.89%
	257 (CheckPoint FW)	 (0.00%)	29.1 GB	30.3 GB	0.48%
	24158 (Windows Server Management)	 (8.49%)	23.1 GB	21.1 GB	0.38%
	1159 (Oracle Database)	 (1.39%)	18.4 GB	18.1 GB	0.30%
	5989 (wbem-https)	 (0.00%)	17.3 GB	17.8 GB	0.28%
	55059 (Unknown)	 (69.85%)	16.8 GB	5199.5 MB	0.28%
	1026 (Microsoft DCOM)	 (0.00%)	16.7 GB	17.1 GB	0.27%
	7777 (cbt)	 (95.34%)	14.2 GB	678.0 MB	0.23%
	49612 (Unknown)	 (57.22%)	14.0 GB	6137.2 MB	0.23%
	49221 (Unknown)	 (0.00%)	13.1 GB	14.1 GB	0.21%
	135 (EPM)	 (49.31%)	11.4 GB	5935.7 MB	0.19%
	52556 (Unknown)	 (95.65%)	6655.9 MB	289.7 MB	0.11%
	18192 (Unknown)	 (3.73%)	6624.4 MB	6377.3 MB	0.11%
	2049 (nfs)	 (73.76%)	4485.2 MB	1176.8 MB	0.07%
	8080 (webcache)	 (45.75%)	3880.5 MB	2105.2 MB	0.06%
	8443 (pcsync-https)	 (0.00%)	3740.9 MB	3854.5 MB	0.06%

## Data Reduction

Average: 54.2%  
 Peak: 87.2%  
 2.2x capacity increase

## LAN Throughput

Total: 6.6 TB

## WAN Throughput

Total: 3.0 TB

3.6 TB was removed from the WAN link.

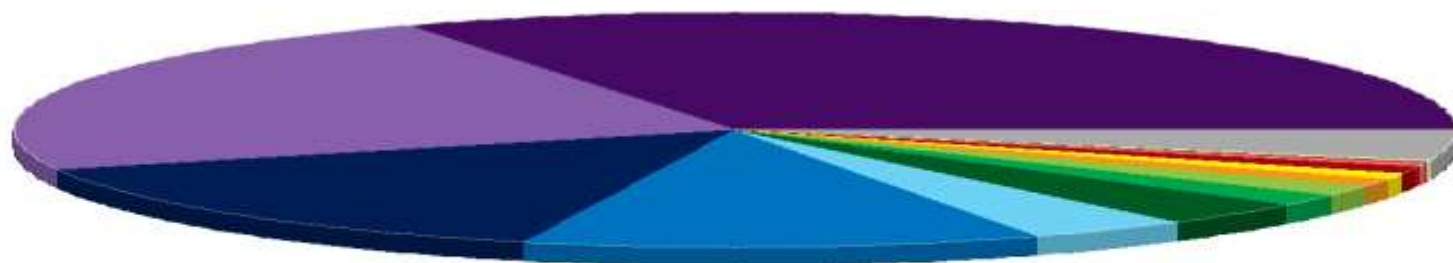
**Summary:** Optimized WAN traffic from VDC to KDC showing reduction in WAN traffic.

**Observation:** Total traffic was optimized by 54.2% resulting in a traffic decrease of 3.6 TB

**Recommendation:** Not applicable



# KDC WAN Optimized Traffic Summary - December 2013



Period: (Custom) Type: Optimized Traffic: Bi-Directional Refresh: Off Go

Start Time: 2013/12/01 00:00:00

End Time: 2014/01/01 00:00:00

Port	Reduction	LAN Data	WAN Data	Traffic %
Total Optimized Traffic	(54.34%)	6134.4 GB	2801.0 GB	--
902 (VMware ESXi)	(64.37%)	1999.5 GB	712.5 GB	32.60%
1521 (Oracle Database)	(71.96%)	1426.1 GB	399.8 GB	23.25%
9002 (Pelco DVR)	(0.00%)	907.4 GB	916.1 GB	14.79%
1522 (Oracle Database)	(75.29%)	729.4 GB	180.2 GB	11.89%
8779 (Windows Server File Transfer)	(78.81%)	233.9 GB	49.6 GB	3.81%
18184 (CheckPoint FW)	(0.00%)	204.6 GB	210.0 GB	3.33%
1433 (SQL Database)	(65.66%)	110.0 GB	37.8 GB	1.79%
445 (Windows Server File Transfer)	(76.35%)	96.0 GB	22.7 GB	1.57%
80 (Web Traffic)	(71.27%)	78.2 GB	22.5 GB	1.27%
1524 (Oracle Database)	(0.00%)	60.8 GB	71.8 GB	0.99%
8014 (Symantec Endpoint Protection)	(93.11%)	54.4 GB	3837.2 MB	0.89%
257 (CheckPoint FW)	(0.00%)	29.1 GB	30.3 GB	0.47%
24158 (Windows Server Management)	(8.49%)	23.1 GB	21.1 GB	0.38%
1159 (Oracle Database)	(0.00%)	17.6 GB	17.9 GB	0.29%
5989 (wbem-https)	(0.00%)	17.3 GB	17.8 GB	0.28%
55059 (Unknown)	(69.85%)	16.8 GB	5185.7 MB	0.27%
1026 (Microsoft DCOM)	(0.00%)	16.7 GB	17.1 GB	0.27%
7777 (cbt)	(95.33%)	14.2 GB	679.2 MB	0.23%
49612 (Unknown)	(57.24%)	14.0 GB	6126.9 MB	0.23%
49221 (Unknown)	(0.00%)	13.1 GB	14.1 GB	0.21%
135 (EPM)	(49.30%)	11.4 GB	5935.4 MB	0.19%
52556 (Unknown)	(95.68%)	6657.7 MB	287.6 MB	0.11%
18192 (Unknown)	(3.89%)	6633.9 MB	6375.8 MB	0.11%
8080 (webcache)	(46.28%)	3917.7 MB	2104.4 MB	0.06%
8443 (pcsync-https)	(0.00%)	3735.3 MB	3854.0 MB	0.06%

**Data Reduction**  
 Average: 54.8%  
 Peak: 87.2%  
 2.2x capacity increase  
**LAN Throughput**  
 Total: 8.2 TB  
**WAN Throughput**  
 Total: 3.7 TB  
 4.5 TB was removed from the WAN link.

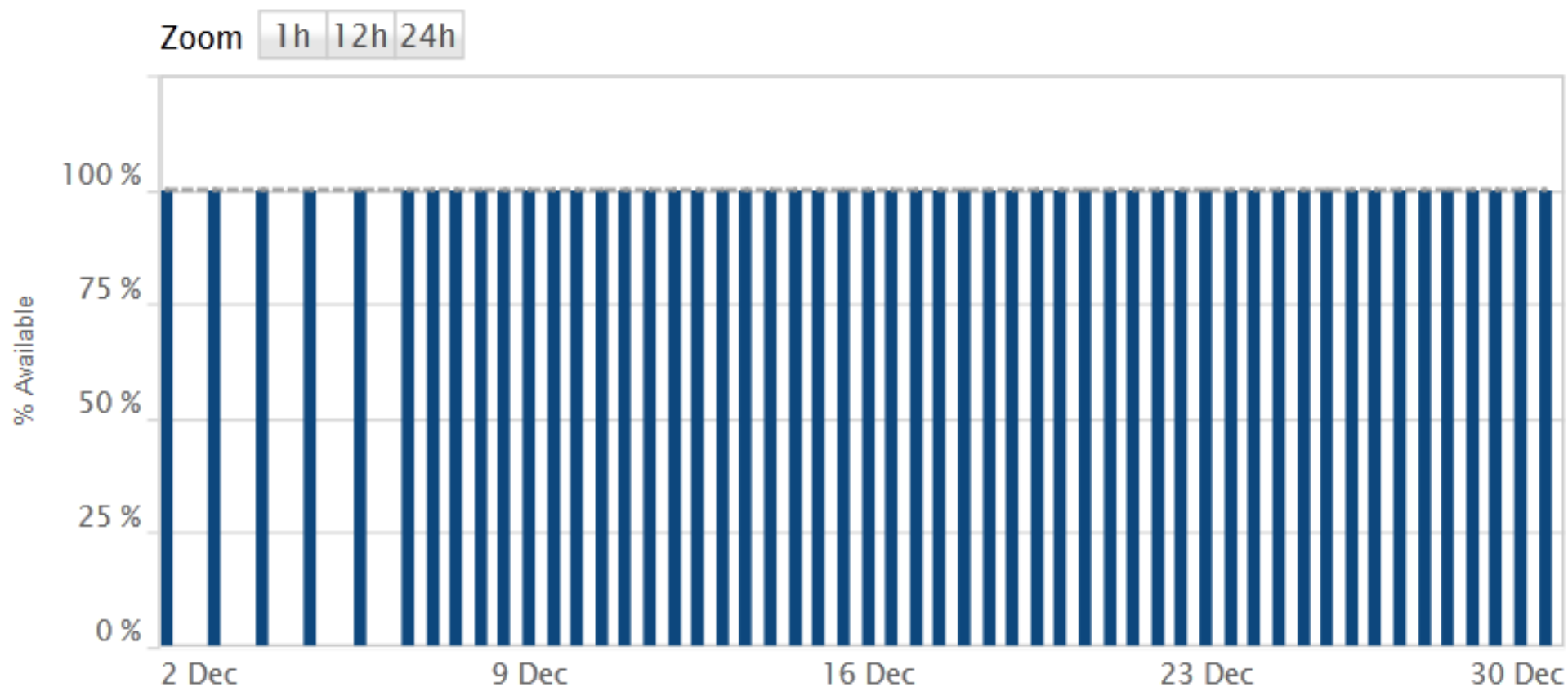
**Summary:** Optimized WAN traffic from KDC to VDC showing reduction in WAN traffic.

**Observation:** Total traffic was optimized by 54.8% resulting in a traffic decrease of 4.5 TB

**Recommendation:** Not applicable

## VDCGTM – VDC Global Traffic Manager Availability December 2013

GTM is used for DNS Load Balancing



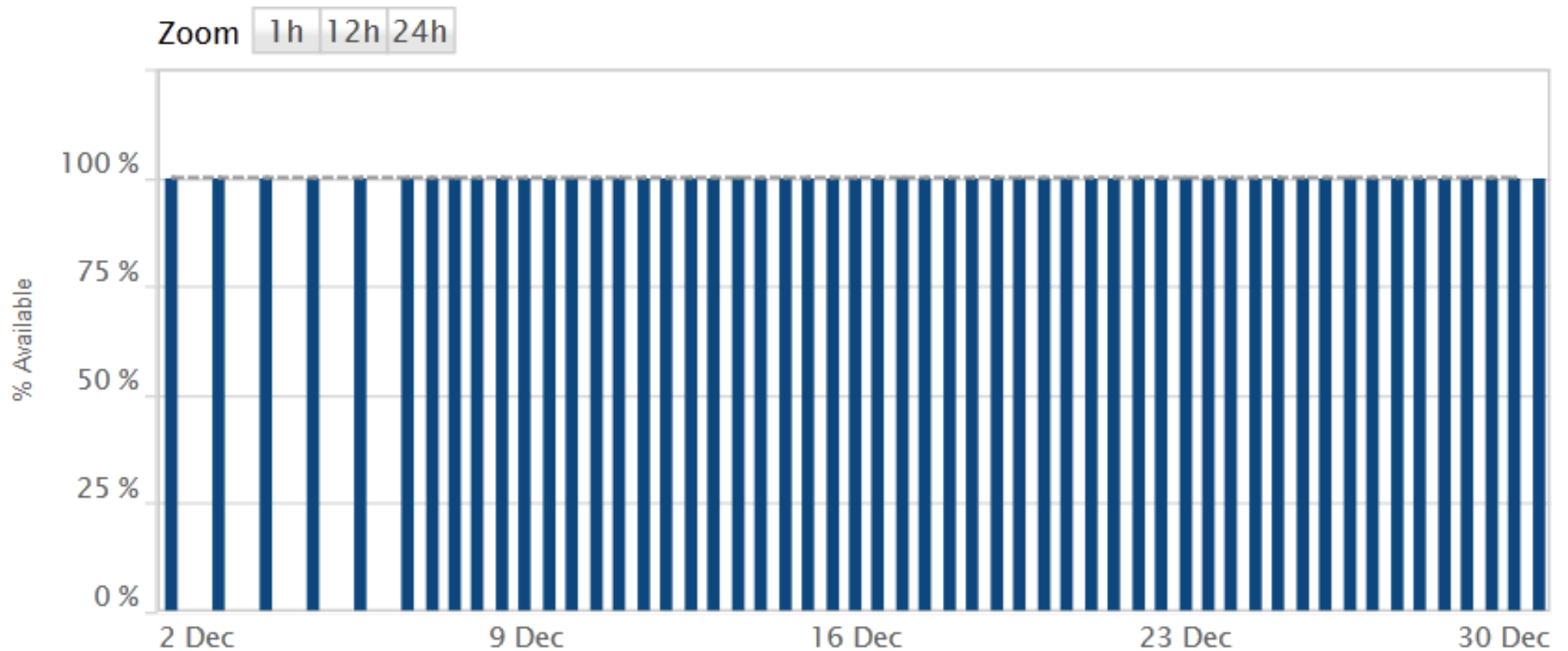
**Summary:** High level graphical view of VDC GTM Availability for the month of December 2013.

**Observation:** None

**Recommendation:** Not applicable

## **KDCGTM – VDC Global Traffic Manager Availability December 2013**

**GTM is used for DNS Load Balancing**

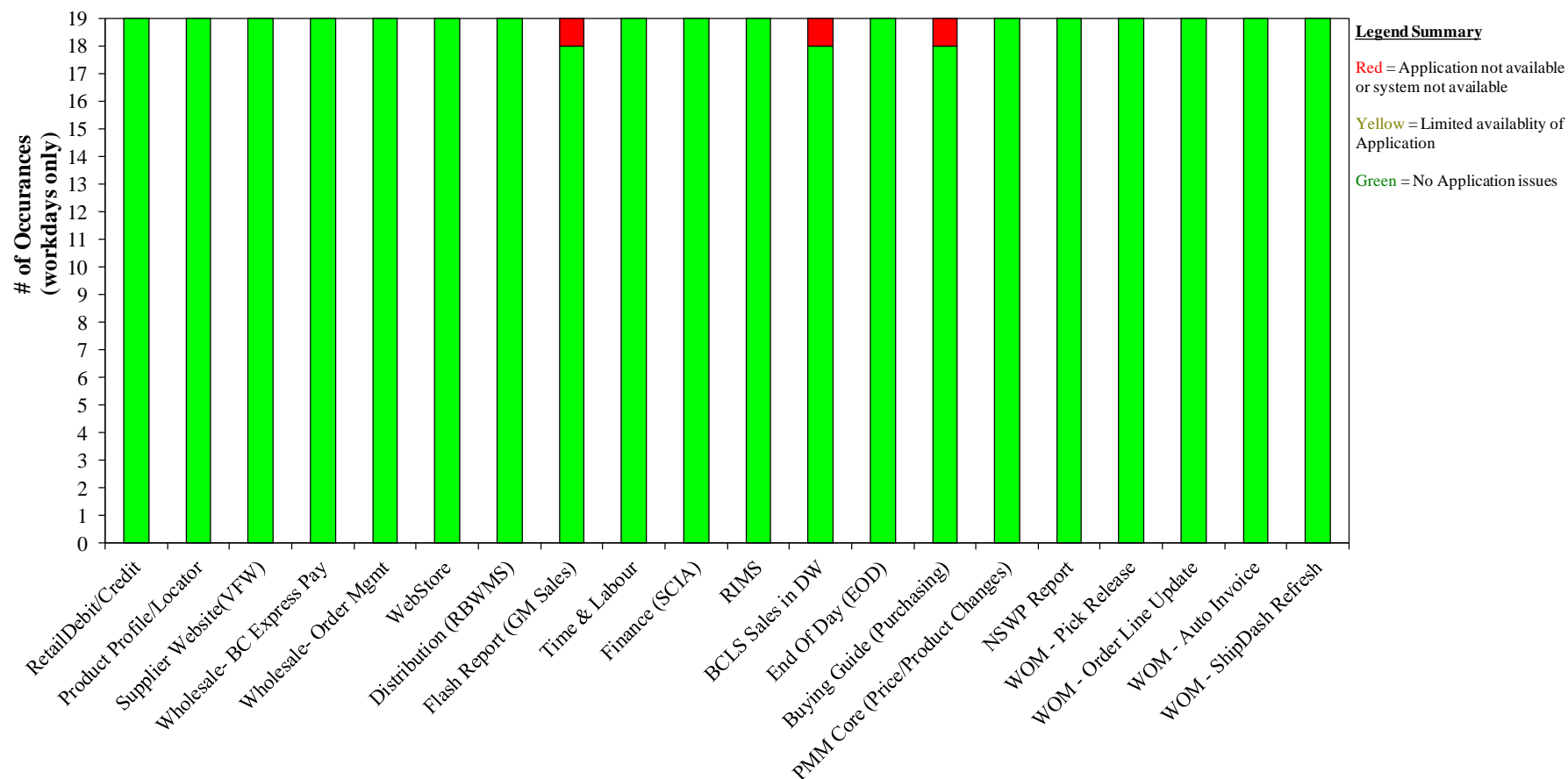


**Summary:** High level graphical view of KDC GTM Availability for the month of December 2013.

**Observation:** None

**Recommendation:** Not applicable

# Daily (7:00am Snapshot) Availability of Business Application – December 2013



## Key Applications

### Summary:

High level graphical view of Business Applications availability.

### Observation:

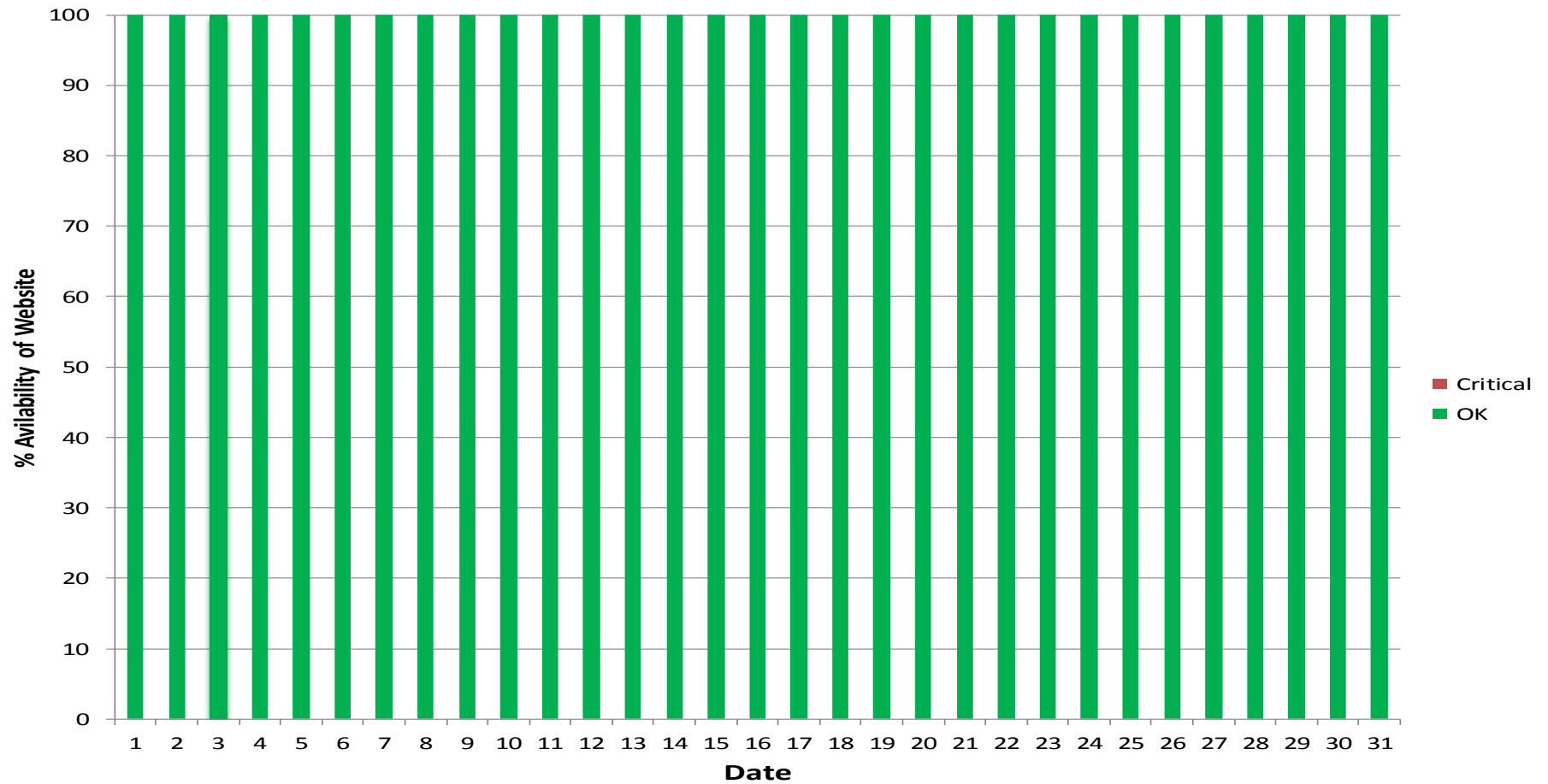
On December 20<sup>th</sup>, there was an issue with Autosys Scheduler which effected many Autosys jobs related to the Flash Report, BCLS Sales in DW and Buying Guide. Please see BMC # 569002 for further details.

### Recommendation:

Not applicable



## WebStore Availability December 2013

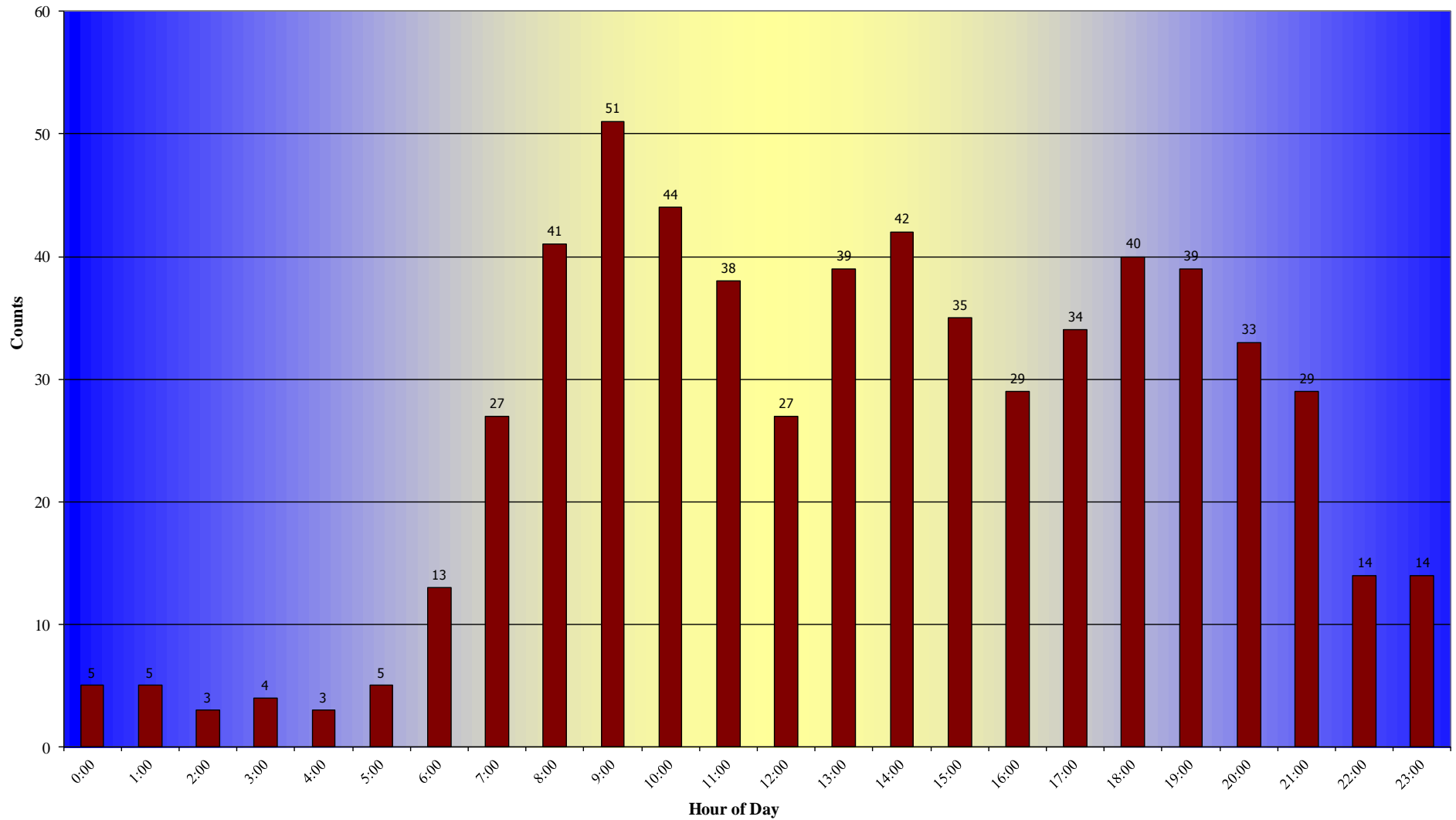


**Summary:** High level graphical view of Webstore's Availability for the month of December 2013.

**Observation:** There were no issues in the month of December in terms of WebStore outage or availability.

**Recommendation:** Not applicable

## Remote Access –December 2013



### Summary:

High level graphical view of Users remotely accessing Head Office resources shown in hours of the day for the month of December.

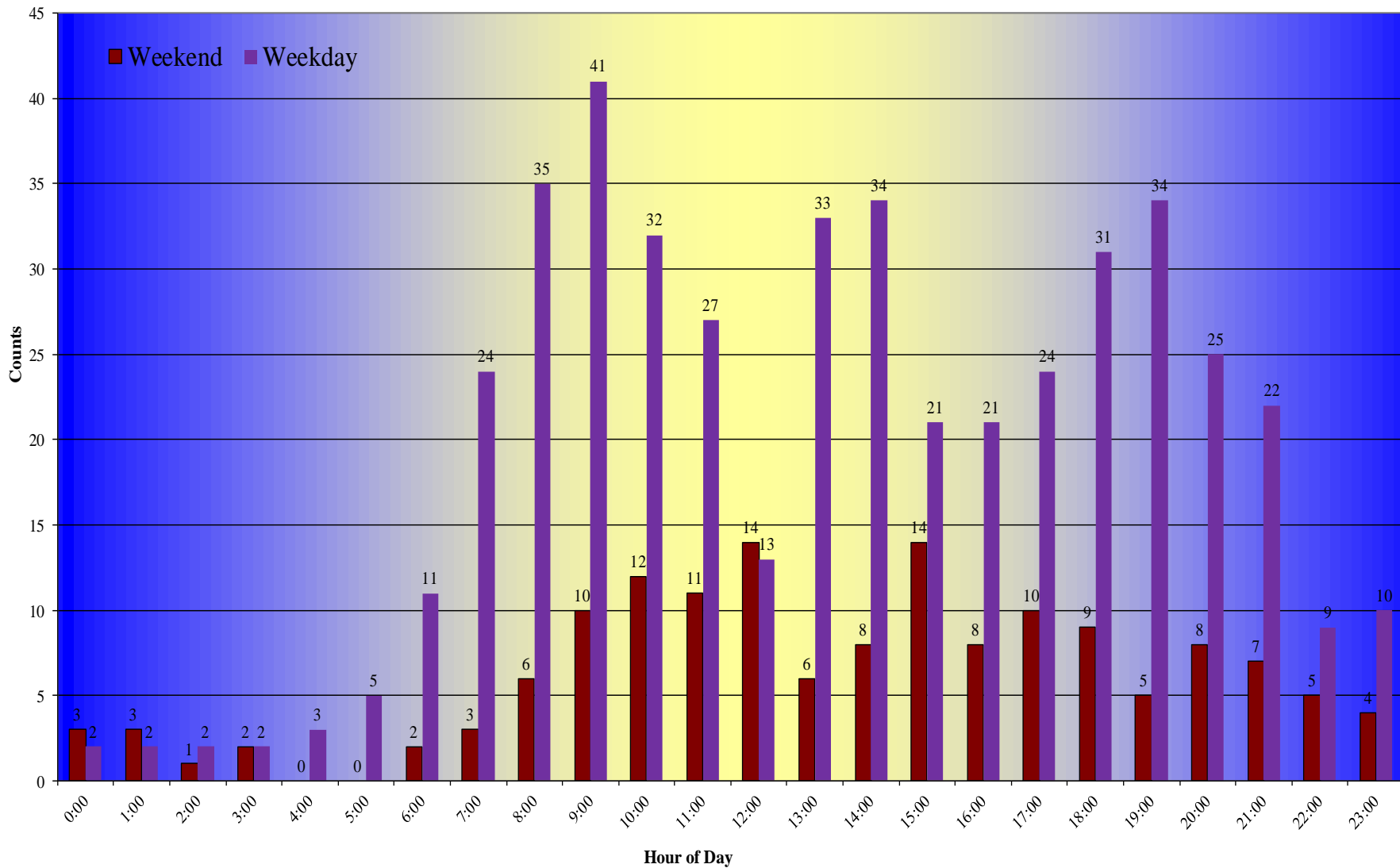
### Observation:

More people accessing Head Office resources in the afternoon and evening combined versus in the morning.

### Recommendation:

Not applicable

## Weekend vs Weekday Remote Access – December 2013



### Summary:

High level graphical view of Users remotely accessing Head Office resources on the Weekend vs Weekday shown in hours of the day for the month of December.

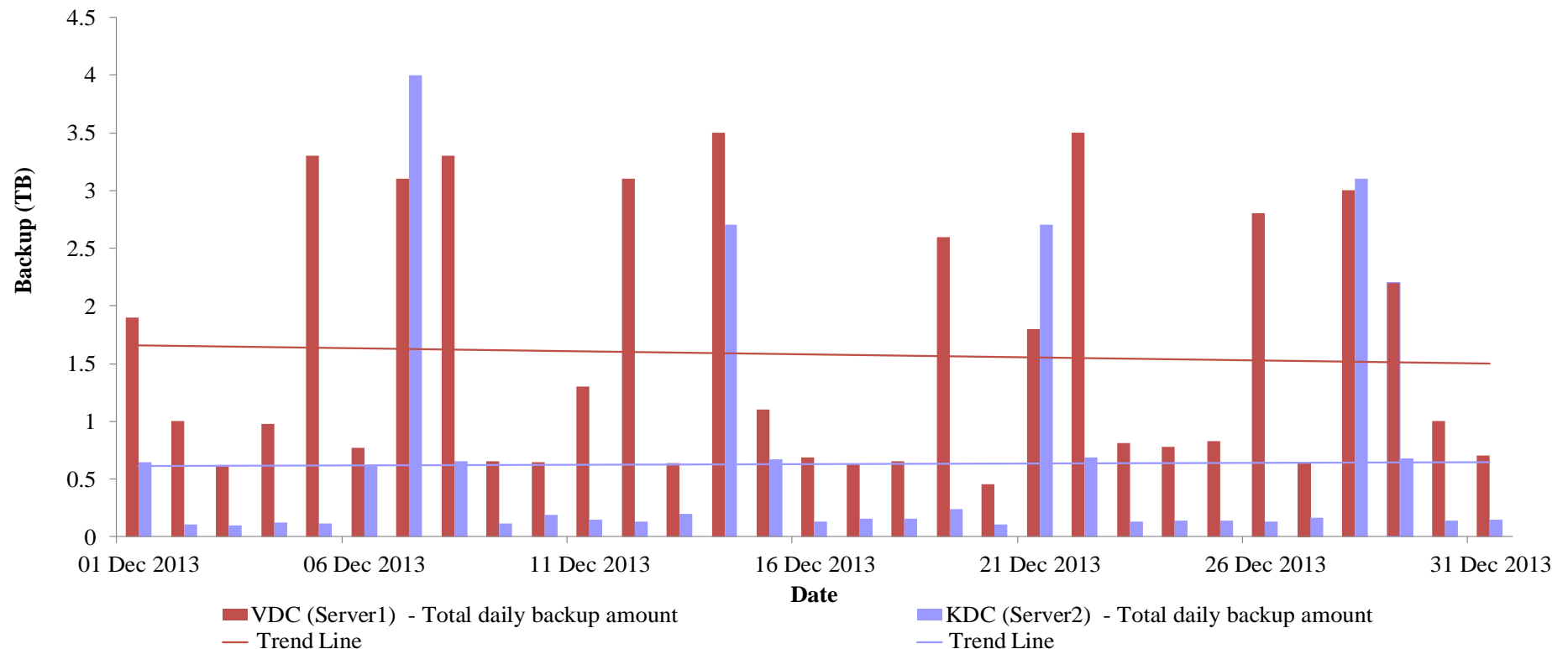
### Observation:

A lot of people accessing Head Office resources in the Weekday vs. Weekend no matter which time of day.

### Recommendation:

Not applicable

## Total Daily Backup Amount (TB) – December 2013



### Summary:

High level graphical view graphical view of TSM Daily Backup for the month of November.

Note: Each LTO4 tape holds 1.6TB. The VDC library has 253 tape slots and KDC library has 125 tape slots. The capacity is limited by the number of slots we can put as scratch tapes. However the Vault capacity is infinite as we continue to order tapes as required.

### Observation:

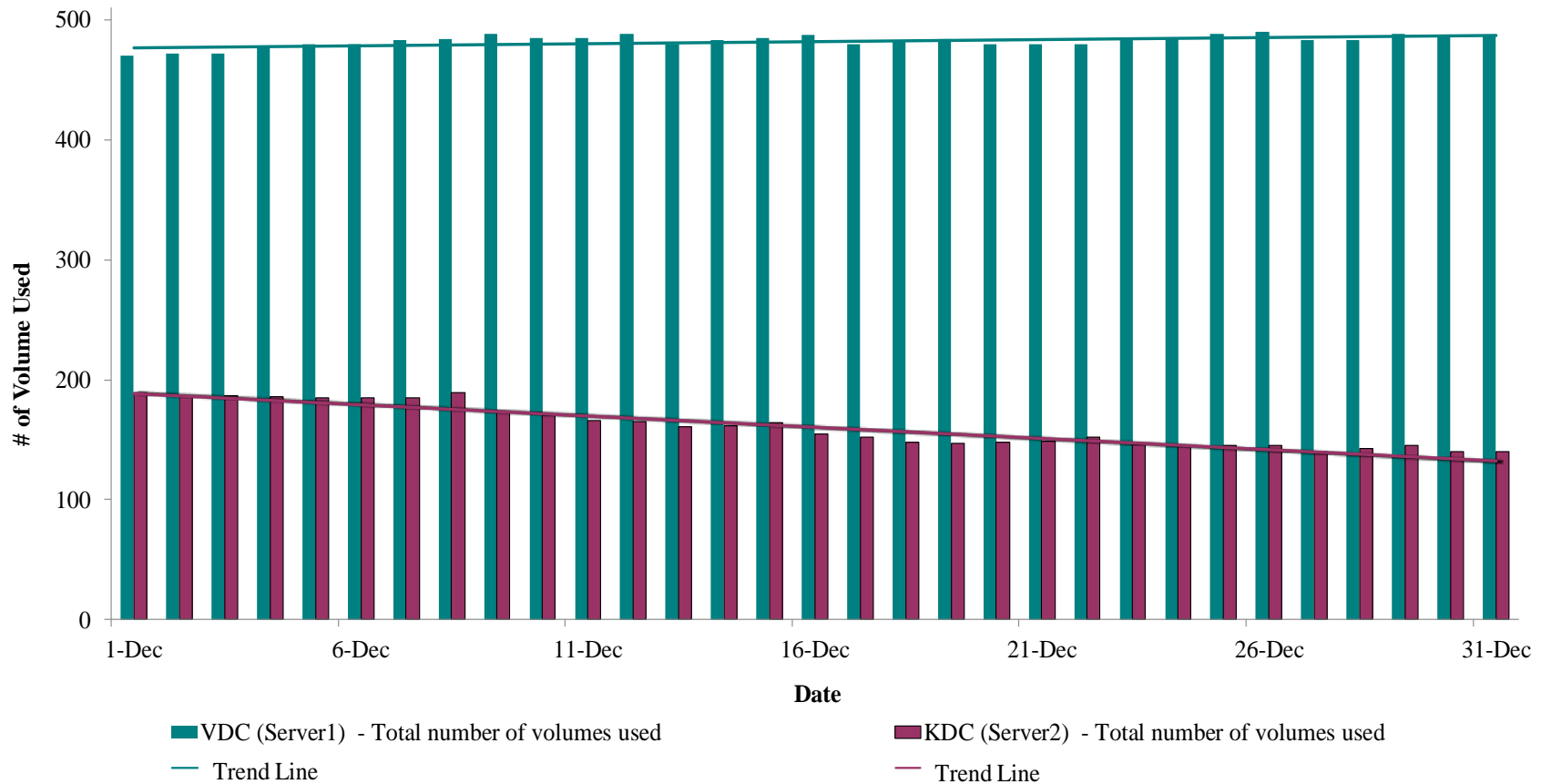
On December 7<sup>th</sup> – Both KDC and VDC had over 7.1TB of SAN storage data backed up by TSM on to tape.

### Recommendation:

Not applicable



## Total Number of Volumes Used – December 2013



### Summary:

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

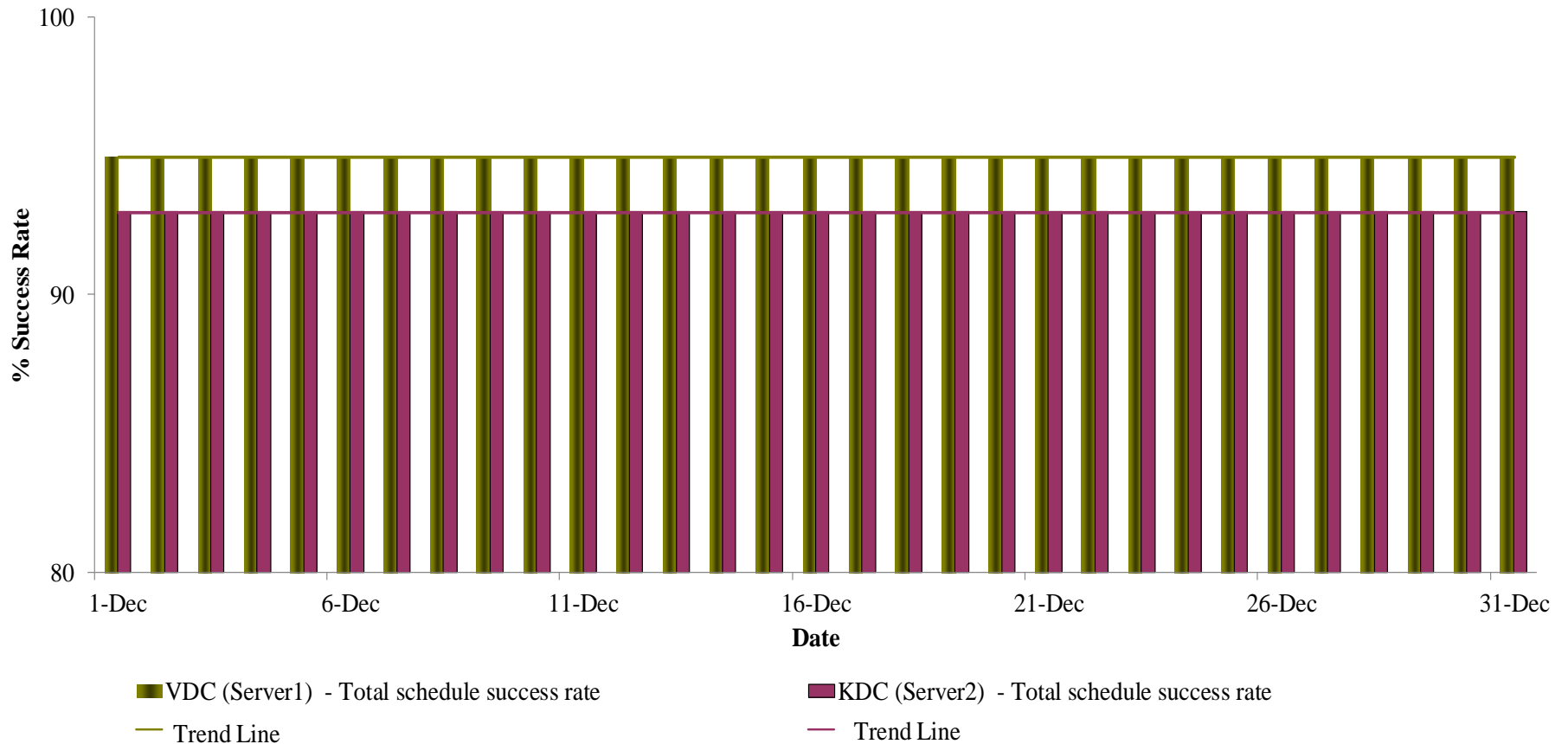
### Observation:

The VDC library has 253 tape slots and 236 of them are in use. The KDC library has 125 tape slots and 125 of them are in use. This also includes Tapes that off site at Iron Mountain.

### Recommendation:

Not applicable

## Total Schedule Success Rate – December 2013

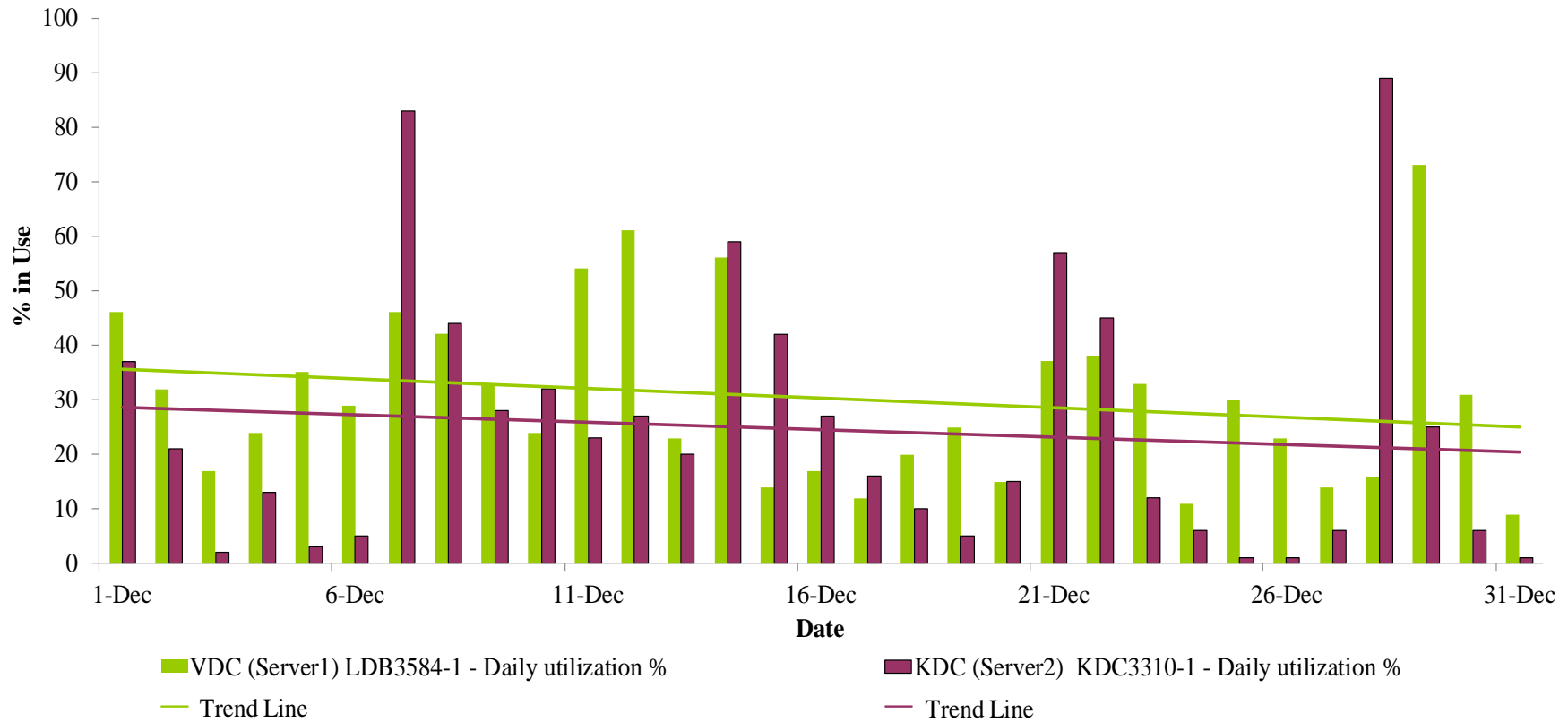


**Summary:** High level graphical view of TSM being successful in completing the backups on a daily basis for the month of December.

**Observation:** Continue to work on the resolution for the failures.

**Recommendation:** Not applicable

## Daily TSM Utilization (%) – December 2013



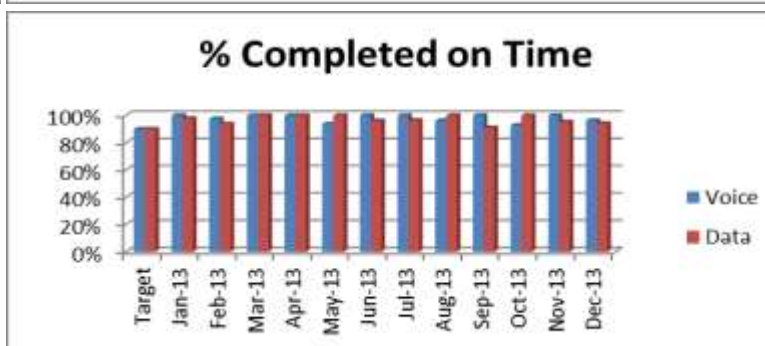
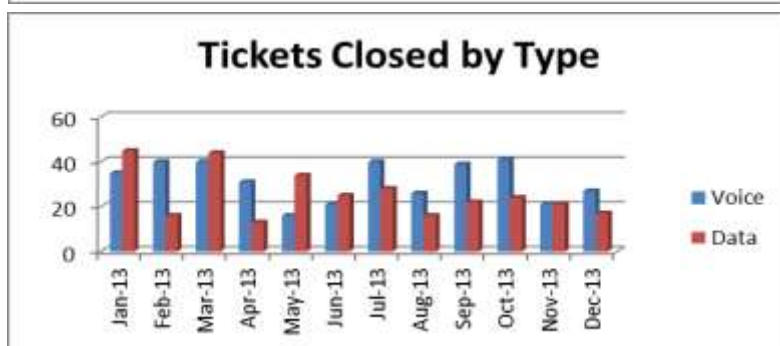
**Summary:** High level graphical view of TSM Tapes being mounted each day for the month of December.

**Observation:** TSM is highly utilized on the weekends. Four times KDC TSM was more utilized versus VDC TSM.

**Recommendation:** Not applicable

## Network Service Statistics Summary

Totals	Target	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Tickets closed		80	56	84	44	50	46	68	42	61	65	42	44
Completed on time		79	54	84	44	49	45	67	41	59	62	41	42
% Completed on time	90%	99%	96%	100%	100%	98%	98%	99%	98%	97%	95%	98%	95%
Internal													
Tickets closed		60	30	57	36	42	31	49	33	51	47	29	30
Completed on time		59	29	57	36	42	31	49	32	49	44	29	30
% Completed on time	90%	98%	97%	100%	100%	100%	100%	100%	97%	96%	94%	100%	100%
External (SSBC service)													
Tickets closed		20	26	27	8	8	15	19	9	10	18	13	14
Completed on time		20	25	27	8	7	14	18	9	10	18	12	12
% Completed on time	90%	100%	96%	100%	100%	88%	93%	95%	100%	100%	100%	92%	86%





## Network Service Statistics Summary

Voice	Target	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Tickets closed		35	40	40	31	16	21	40	26	39	41	21	27
Completed on time		35	39	40	31	15	21	40	25	39	38	21	26
% Completed on time	90%	100%	98%	100%	100%	94%	100%	100%	96%	100%	93%	100%	96%
Internal													
Tickets closed		21	19	16	26	11	10	24	20	29	24	10	15
Completed on time		21	19	16	26	11	10	24	19	29	21	10	15
% Completed on time	90%	100%	100%	100%	100%	100%	100%	100%	95%	100%	88%	100%	100%
External (SSBC service)													
Tickets closed		14	21	24	5	5	11	16	6	10	17	11	12
Completed on time		14	20	24	5	4	11	16	6	10	17	11	11
% Completed on time	90%	100%	95%	100%	100%	80%	100%	100%	100%	100%	100%	100%	92%

Data	Target	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Tickets closed		45	16	44	13	34	25	28	16	22	24	21	17
Completed on time		44	15	44	13	34	24	27	16	20	24	20	16
% Completed on time	90%	98%	94%	100%	100%	100%	96%	96%	100%	91%	100%	95%	94%
Internal													
Tickets closed		39	11	41	10	31	21	25	13	22	23	19	15
Completed on time		38	10	41	10	31	21	25	13	20	23	19	15
% Completed on time	90%	97%	91%	100%	100%	100%	100%	100%	100%	91%	100%	100%	100%
External (SSBC service)													
Tickets closed		6	5	3	3	3	4	3	3	0	1	2	2
Completed on time		6	5	3	3	3	3	2	3	0	1	1	1
% Completed on time	90%	100%	100%	100%	100%	100%	75%	67%	100%	100%	100%	50%	50%

## Network Service Statistics Head Office Details

HO Voice	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Tickets closed	22	31	32	27	13	15	34	21	32	31	16	24
Completed on time	22	31	32	27	12	15	34	20	32	29	16	24
% Completed on time	100%	100%	100%	100%	92%	100%	100%	95%	100%	94%	100%	100%
Internal												
Tickets closed	12	16	10	24	10	5	19	17	24	19	7	13
Completed on time	12	16	10	24	10	5	19	16	24	17	7	13
% Completed on time	100%	100%	100%	100%	100%	100%	100%	94%	100%	89%	100%	100%
External (SSBC service)												
Tickets closed	10	15	22	3	3	10	15	4	8	12	9	11
Completed on time	10	15	22	3	2	10	15	4	8	12	9	11
% Completed on time	100%	100%	100%	100%	67%	100%	100%	100%	100%	100%	100%	100%

HO Data	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Tickets closed	18	6	18	10	6	9	10	7	4	9	10	7
Completed on time	18	5	18	10	6	9	10	7	4	9	9	6
% Completed on time	100%	83%	100%	100%	100%	100%	100%	100%	100%	100%	90%	86%
Internal												
Tickets closed	17	6	17	8	5	9	9	7	4	8	8	6
Completed on time	17	5	17	8	5	9	9	7	4	8	8	6
% Completed on time	100%	83%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
External (SSBC service)												
Tickets closed	1	0	1	2	1	0	1	0	0	1	2	1
Completed on time	1	0	1	2	1	0	1	0	0	1	1	0
% Completed on time	100%	0%	100%	100%	100%	0%	100%	0%	0%	100%	50%	0%

## Network Service Statistics Branch Details

Branch Voice	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Tickets closed	13	9	8	4	3	6	6	5	7	10	5	3
Completed on time	13	8	8	4	3	6	6	5	7	9	5	2
% Completed on time	100%	89%	100%	100%	100%	100%	100%	100%	100%	90%	100%	67%
Internal												
Tickets closed	9	3	6	2	1	5	5	3	5	5	3	2
Completed on time	9	3	6	2	1	5	5	3	5	4	3	2
% Completed on time	100%	100%	100%	100%	100%	100%	100%	100%	100%	80%	100%	100%
External (SSBC service)												
Tickets closed	4	6	2	2	2	1	1	2	2	5	2	1
Completed on time	4	5	2	2	2	1	1	2	2	5	2	0
% Completed on time	100%	83%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%

Branch Data	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Tickets closed	27	10	26	3	28	16	18	9	18	15	11	10
Completed on time	26	10	26	3	28	15	17	9	16	15	11	10
% Completed on time	96%	100%	100%	100%	100%	94%	94%	100%	89%	100%	100%	100%
Internal												
Tickets closed	22	5	24	2	26	12	16	6	18	15	11	9
Completed on time	21	5	24	2	26	12	16	6	16	15	11	9
% Completed on time	95%	100%	100%	100%	100%	100%	100%	100%	89%	100%	100%	100%
External (SSBC service)												
Tickets closed	5	5	2	1	2	4	2	3	0	0	0	1
Completed on time	5	5	2	1	2	3	1	3	0	0	0	1
% Completed on time	100%	100%	100%	100%	100%	75%	50%	100%	0%	0%	0%	100%

## Network Service Statistics

Response Date	Due	Incident	Location	Category	Reason for late Completion
07-Jan-13	18-Dec-12	515771	Store	Data	Time needed to get replacement WIPS sensor
04-Feb-13	30-Jan-13	519804	Store	Voice	Phone needed to be replaced
11-Apr-13	26-Mar-13	524633	Store	Voice	Delay getting information from client and delay getting Voice tree installed
12-Apr-13	05-Oct-12	504778	Store	Data	Cisco bug that was never resolved
23-May-13	17-May-13	537101	Head Office	Voice	Delay receiving password
04-Jun-13	08-Nov-12	509326	Store	Data	Delay waiting for Corp. Sec. to respond
08-Jul-13	02-Jul-13	543659	Store	Data	Telus was delayed in finding problem
27-Aug-13	20-Aug-13	551323	Head Office	Voice	Not a network issue. Problem solved by client computing
11-Oct-13	12-Sep-13	554693	Store	Voice	SSBC delay in removing service
28-Nov-13	31-Oct-13	551175	Head Office	Data	PSA delay in granting access to LDB employees
03-Dec-13	31-Jul-13	547732	Head Office	Data	Keep waiting for Zsolt Molnar to do testing.
16-Dec-13	16-Sep-13	555143	Store	Voice	Time needed to wait for SSBC to do next year's telbook.



# End of Data Centre Chart Analysis

December 2013

