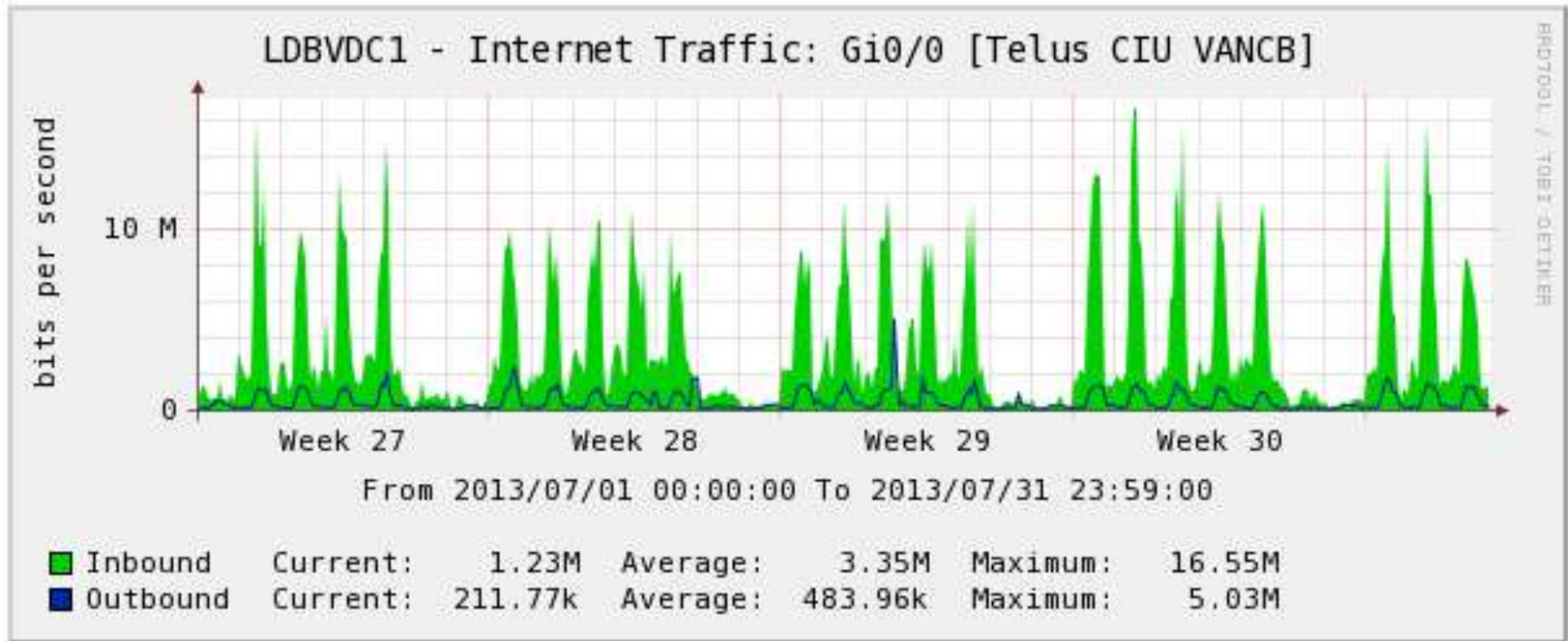


Data Centre Chart Analysis

July 2013

Monthly Vancouver, Head Office Internet Gateway- July 2013

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



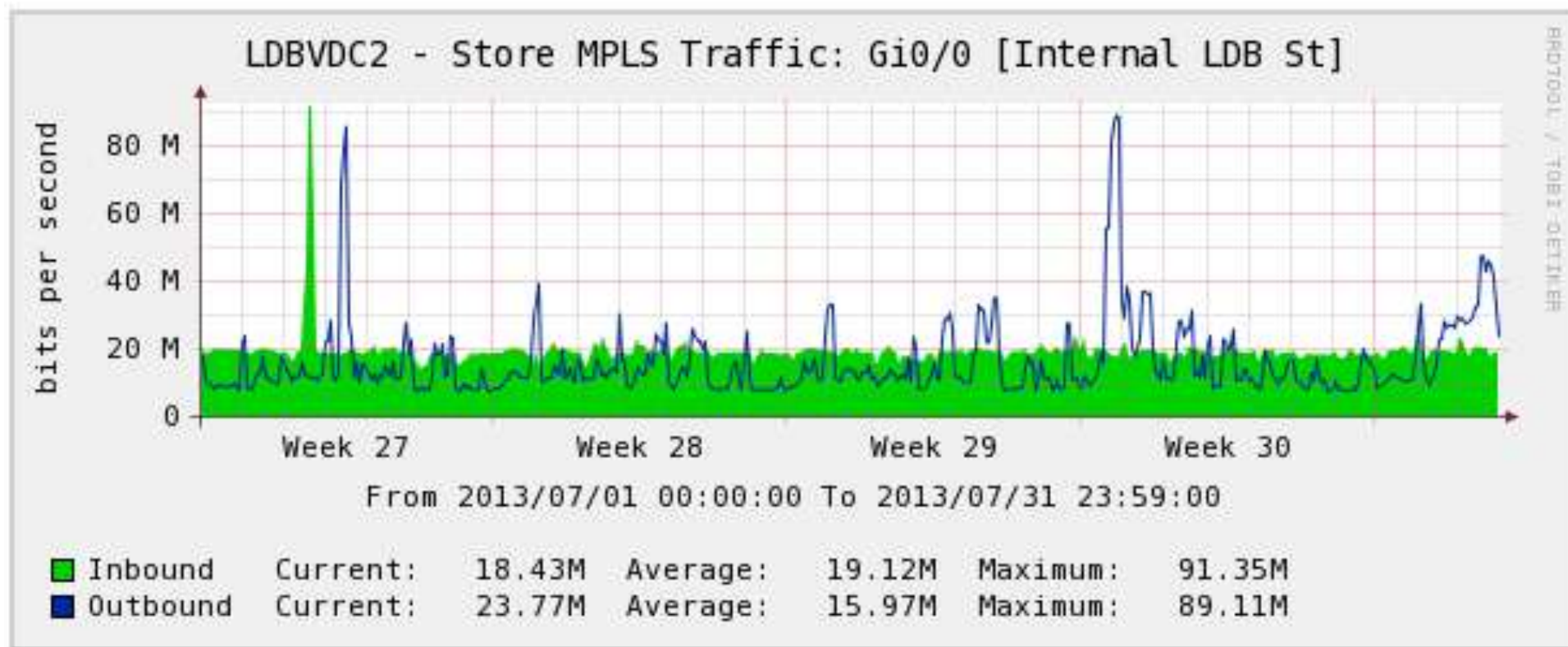
Summary: Graphical view of Head Office Internet data communications. The maximum capacity is 20Mbps.

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 – July 2013

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



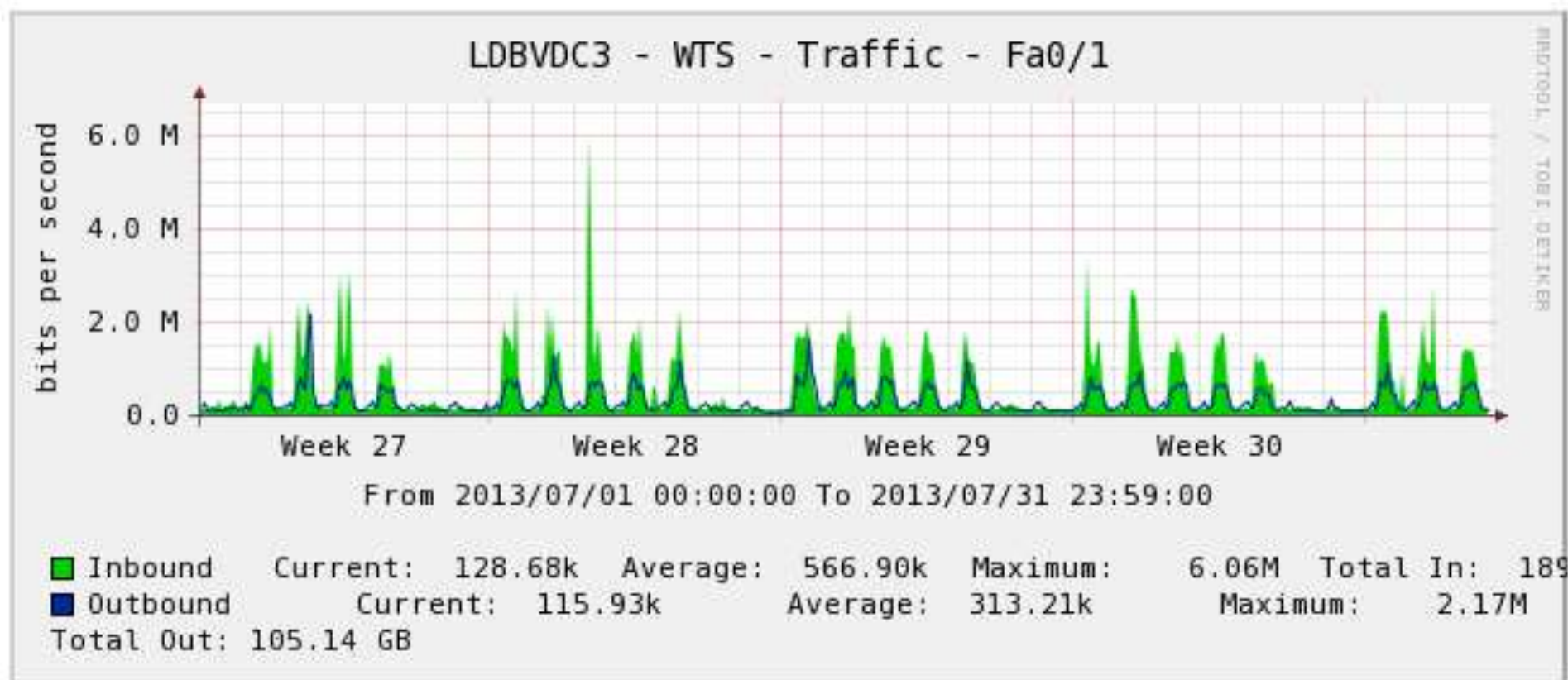
Summary: Graphical view of Head Office, Kamloops Distribution and Stores data communications. The maximum capacity is 100 Mbps.

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 – July 2013

For Corporate and Stores Email and Government websites communications



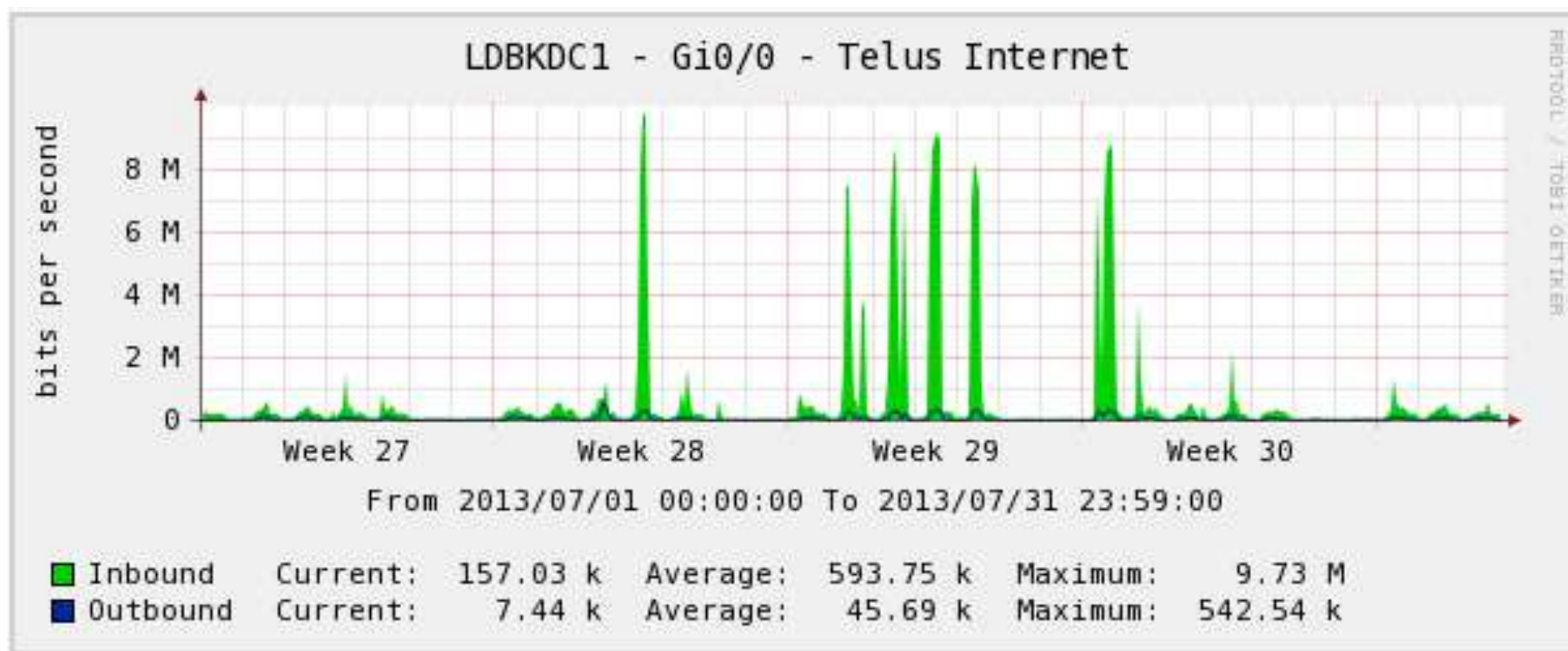
Summary: Graphical view of Head Office and Provincial government data communications. The maximum capacity is 10 Mbps.

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

Recommendation: Not applicable

Monthly Kamloops, Distribution Internet Gateway- July 2013

For WEB Browsing and other external business communications



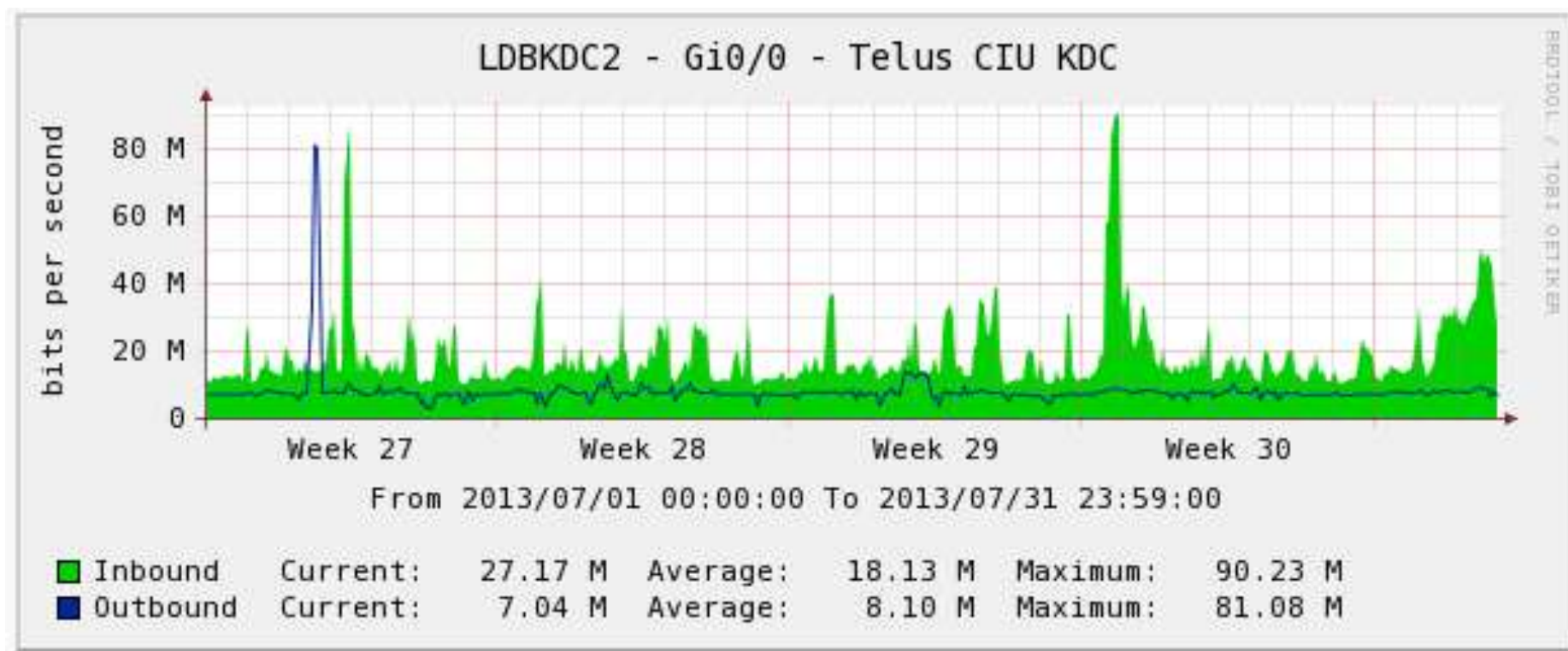
Summary: Graphical view of Kamloops Distribution Internet data communications. The maximum capacity is 10Mbps.

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

Recommendation: Not applicable

Monthly Kamloops, Distribution Private Network Gateway – July 2013

For Vancouver & Kamloops Data Centres communications and Store remote management



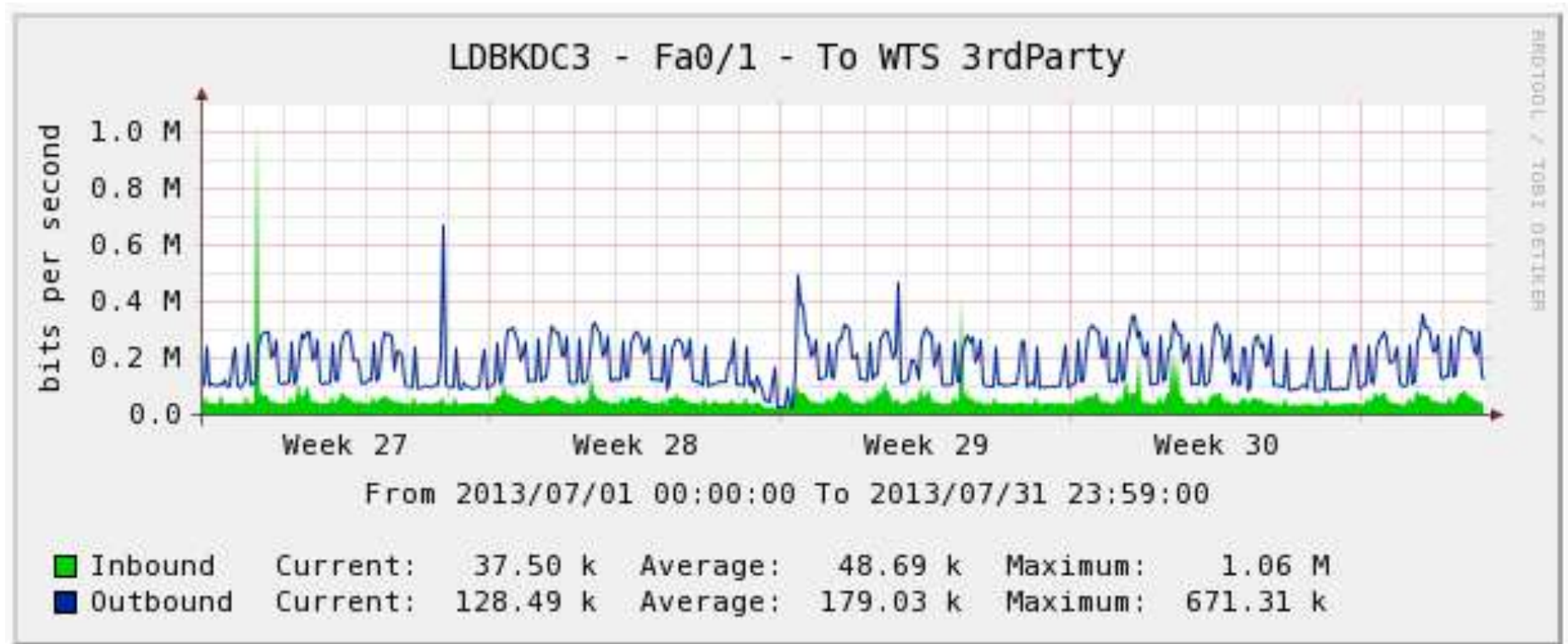
Summary: Graphical view of Head Office, Kamloops Distribution and Stores data communications. The maximum capacity is 100 Mbps.

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

Recommendation: Not applicable

Monthly Kamloops, Distribution to Provincial Government Network Gateway – July 2013

For Corporate and Stores Email and Government websites communications

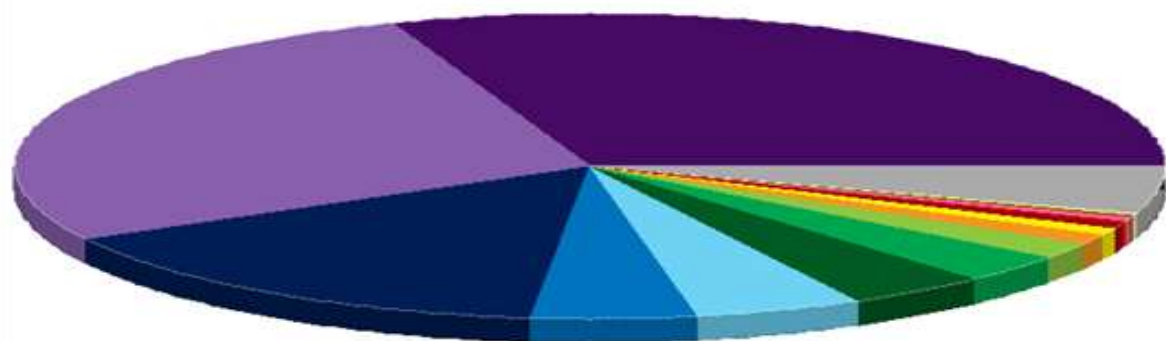


Summary: Graphical view of Kamloops, Distribution and Provincial government data communications. The maximum capacity is 10 Mbps.

Observation: Minimal use

Recommendation: Not applicable

VDC WAN Optimized Traffic Summary - July 2013



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

Start Time:
 2013/07/01 00:00:00

End Time:
 2013/08/01 00:00:00

	Port	Reduction	LAN Data	WAN Data	Traffic %
	Total Optimized Traffic	(57.23%)	5755.0 GB	2461.7 GB	--
	1521 (Oracle Database)	(72.48%)	1767.1 GB	486.3 GB	30.71%
	902 (VMware ESXi)	(87.96%)	1582.7 GB	190.6 GB	27.50%
	9002 (Pelco DVR)	(0.00%)	889.5 GB	902.4 GB	15.46%
	1062 (veracity)	(0.79%)	286.3 GB	284.1 GB	4.97%
	8779 (Windows Server File Transfer)	(81.54%)	285.8 GB	52.8 GB	4.97%
	1522 (Oracle Database)	(76.95%)	238.9 GB	55.1 GB	4.15%
	18184 (CheckPoint FW)	(0.00%)	187.6 GB	192.6 GB	3.26%
	1433 (SQL Database)	(66.35%)	108.3 GB	36.4 GB	1.88%
	1524 (Oracle Database)	(0.00%)	65.0 GB	76.9 GB	1.13%
	445 (Windows Server File Transfer)	(71.37%)	59.4 GB	17.0 GB	1.03%
	80 (Web Traffic)	(87.09%)	47.0 GB	6210.2 MB	0.82%
	257 (CheckPoint FW)	(0.00%)	28.7 GB	30.0 GB	0.50%
	1026 (Microsoft DCOM)	(0.00%)	23.0 GB	23.6 GB	0.40%
	8014 (Symantec Endpoint Protection)	(91.35%)	21.9 GB	1938.9 MB	0.38%

Data Reduction

Average: 57.2%
 Peak: 89.6%
 2.3x capacity increase

LAN Throughput

Total: 6.2 TB

WAN Throughput

Total: 2.6 TB

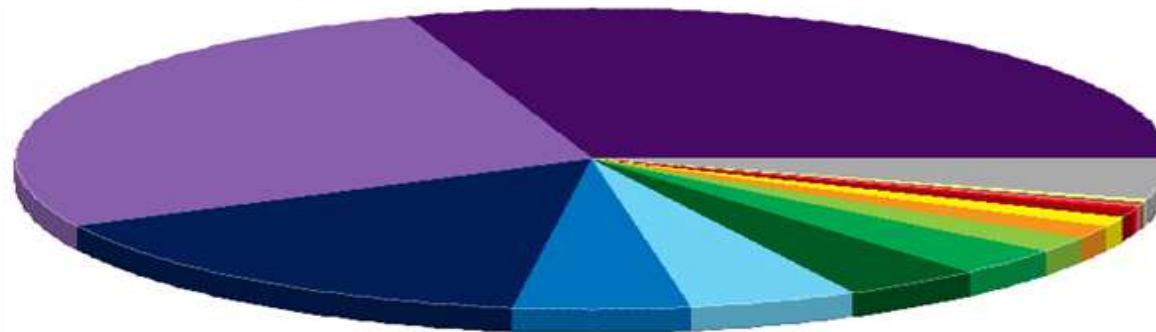
3.5 TB was removed from the WAN link.

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

Observation: Total traffic was optimized by 57.0% resulting in a traffic decrease of 4.2 TB

Recommendation: Not applicable

KDC WAN Optimized Traffic Summary - July 2013



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

Start Time:
2013/07/01 00:00:00

End Time:
2013/08/01 00:00:00

	Port	Reduction	LAN Data	WAN Data	Traffic %
	Total Optimized Traffic	<div><div></div></div> (57.45%)	5785.8 GB	2461.6 GB	--
	1521 (Oracle Database)	<div><div></div></div> (72.48%)	1767.1 GB	486.3 GB	30.54%
	902 (VMware ESXi)	<div><div></div></div> (87.96%)	1583.0 GB	190.6 GB	27.36%
	9002 (Pelco DVR)	<div><div></div></div> (0.00%)	889.6 GB	902.4 GB	15.37%
	8779 (Windows Server File Transfer)	<div><div></div></div> (81.85%)	290.6 GB	52.8 GB	5.02%
	1062 (veracity)	<div><div></div></div> (0.79%)	286.3 GB	284.1 GB	4.95%
	1522 (Oracle Database)	<div><div></div></div> (76.95%)	238.9 GB	55.1 GB	4.13%
	18184 (CheckPoint FW)	<div><div></div></div> (0.00%)	187.6 GB	192.6 GB	3.24%
	1433 (SQL Database)	<div><div></div></div> (66.35%)	108.3 GB	36.4 GB	1.87%
	445 (Windows Server File Transfer)	<div><div></div></div> (80.14%)	85.5 GB	17.0 GB	1.48%
	1524 (Oracle Database)	<div><div></div></div> (0.00%)	65.0 GB	76.9 GB	1.12%
	80 (Web Traffic)	<div><div></div></div> (88.53%)	52.9 GB	6210.5 MB	0.91%
	257 (CheckPoint FW)	<div><div></div></div> (0.00%)	28.7 GB	30.0 GB	0.50%
	1026 (Microsoft DCOM)	<div><div></div></div> (0.00%)	23.0 GB	23.6 GB	0.40%

Data Reduction

Average: 57.2%
Peak: 89.6%
2.3x capacity increase

LAN Throughput

Total: 6.4 TB

WAN Throughput

Total: 2.7 TB

3.6 TB was removed
from the WAN link.

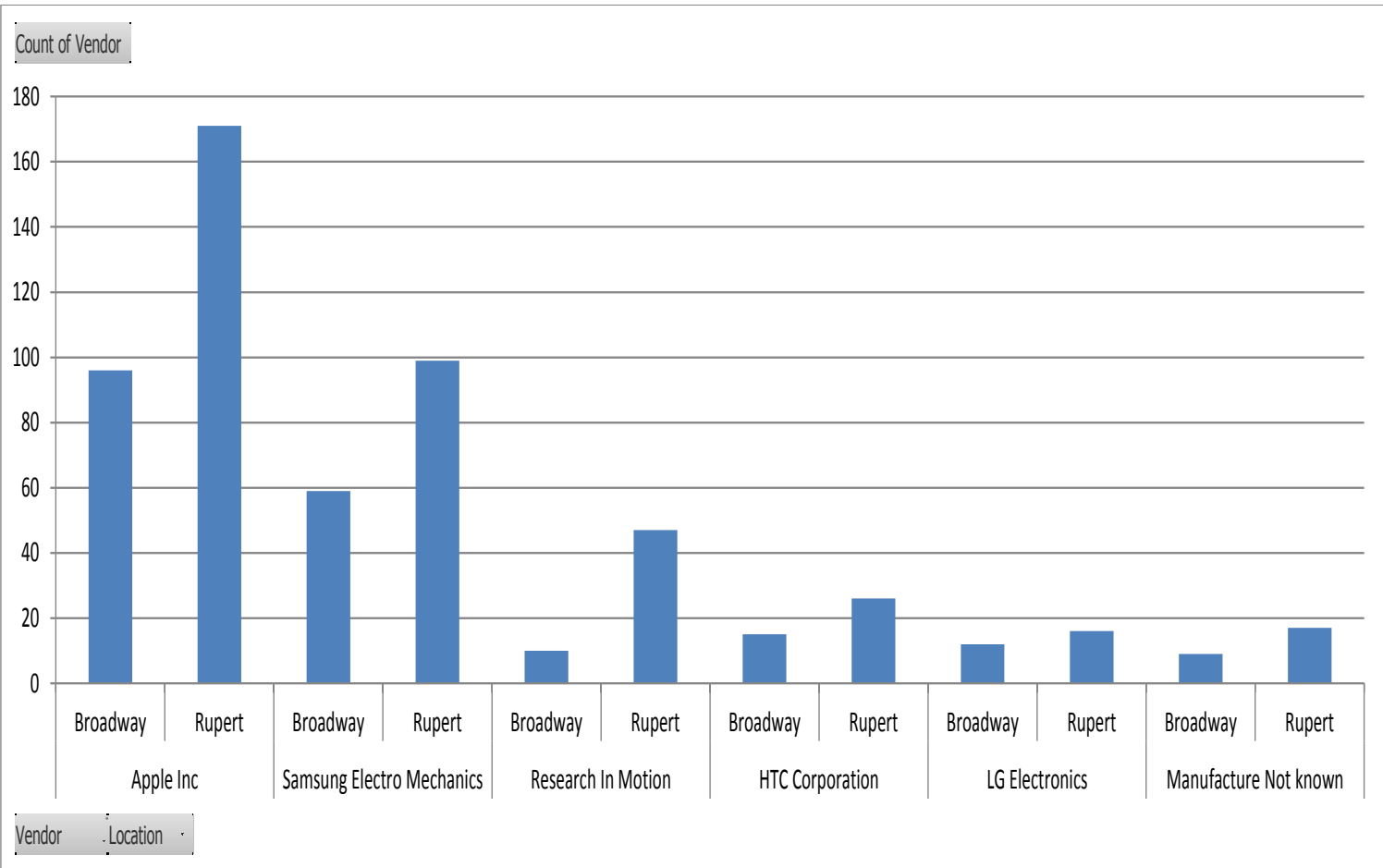
Summary: Optimized WAN traffic from KDC to VDC showing reduction in WAN traffic.

Observation: Total traffic was optimized by 57.3% resulting in a traffic decrease of 4.3 TB

Recommendation: Not applicable

Branch Public WiFi Access, no authentication required – July 2013

Tablet Manufacture	Count of Vendor
Apple Inc	267
Broadway	96
Rupert	171
Samsung Electro Mechanics	158
Broadway	59
Rupert	99
Research In Motion	57
Broadway	10
Rupert	47
HTC Corporation	41
Broadway	15
Rupert	26
LG Electronics	28
Broadway	12
Rupert	16
Manufacture Not known	26
Broadway	9
Rupert	17
Grand Total	577



Summary:

High level graphical view of top 8 vendors using the Public Wireless Network for the month of July 2013.

Observation:

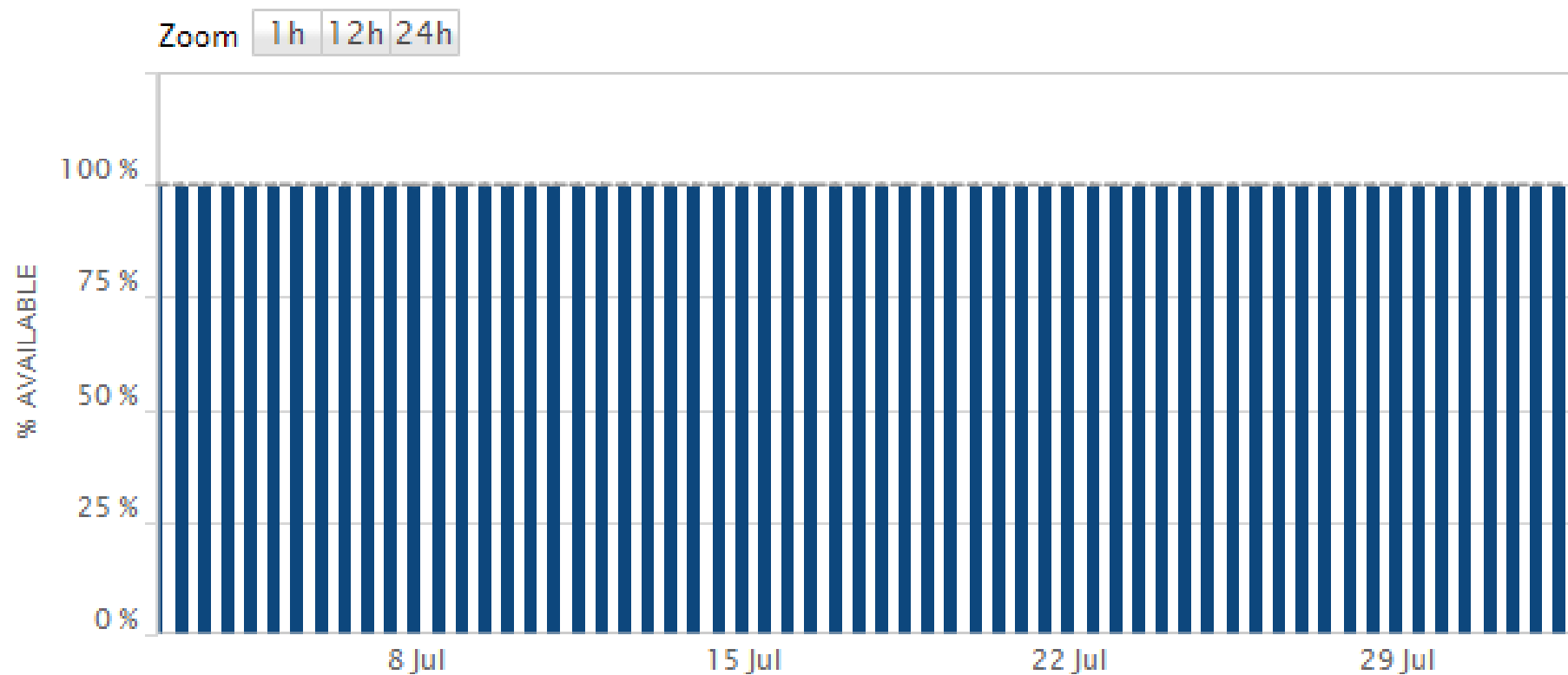
Please note the Rupert building WIFI reporting is missing due a update performed on the Access points names which was done in May. Some devices (Apple) automatically connect to visible Wi-Fi spots, but it does not necessarily reflect usage (they may not have agreed to the terms and actively use the hotspot).

Recommendation:

Not applicable

VDCGTM – VDC Global Traffic Manager Availability July 2013

GTM is used for DNS Load Balancing



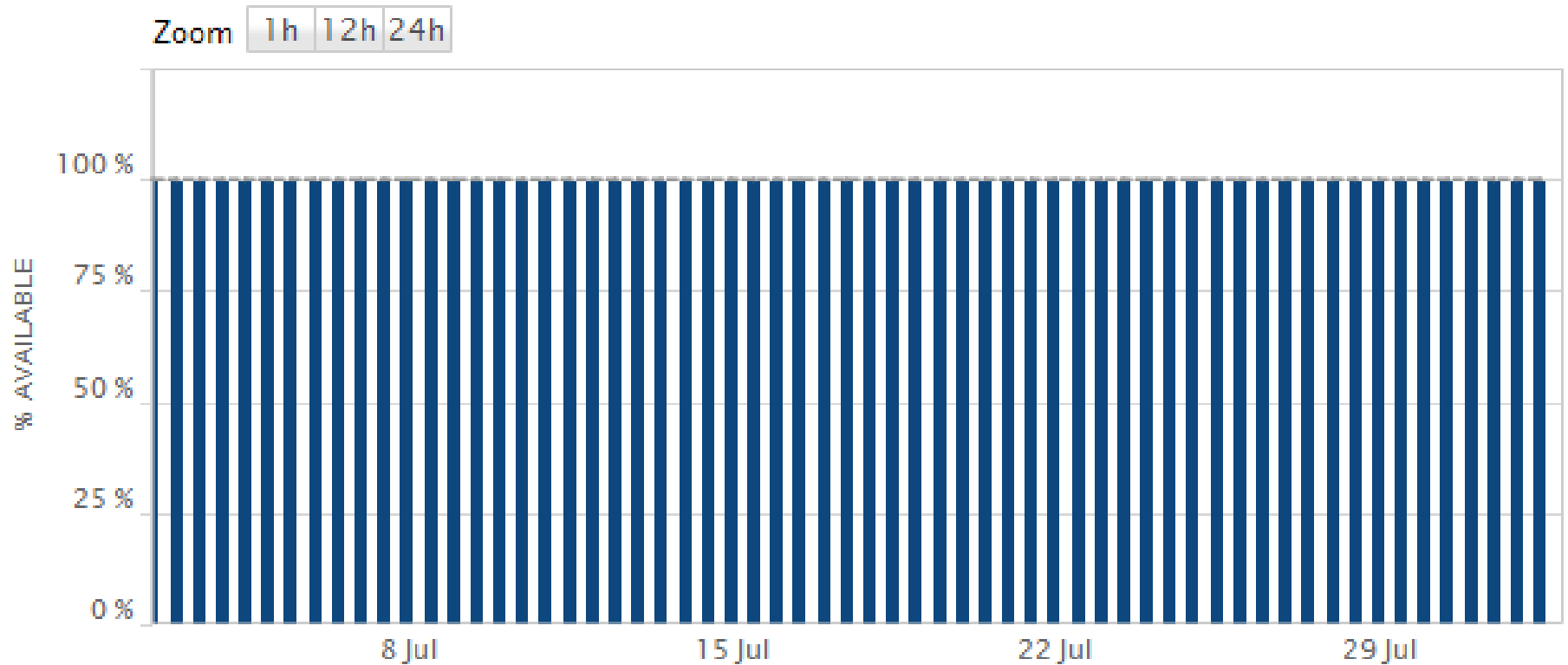
Summary: High level graphical view of VDC GTM Availability for the month of July 2013.

Observation: None

Recommendation: Not applicable

KDCGTM – VDC Global Traffic Manager Availability July 2013

GTM is used for DNS Load Balancing

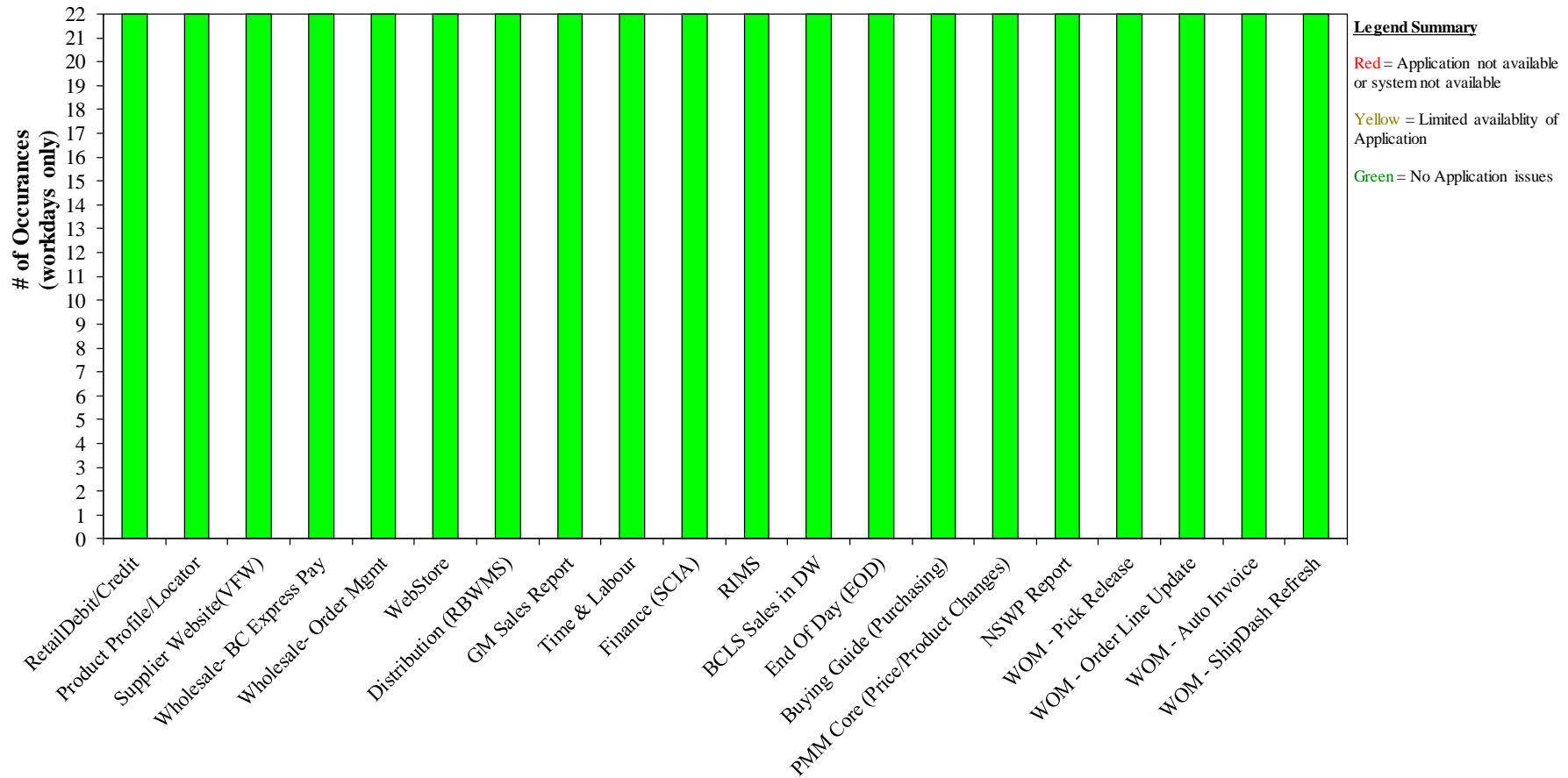


Summary: High level graphical view of KDC GTM Availability for the month of July 2013.

Observation: None

Recommendation: Not applicable

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



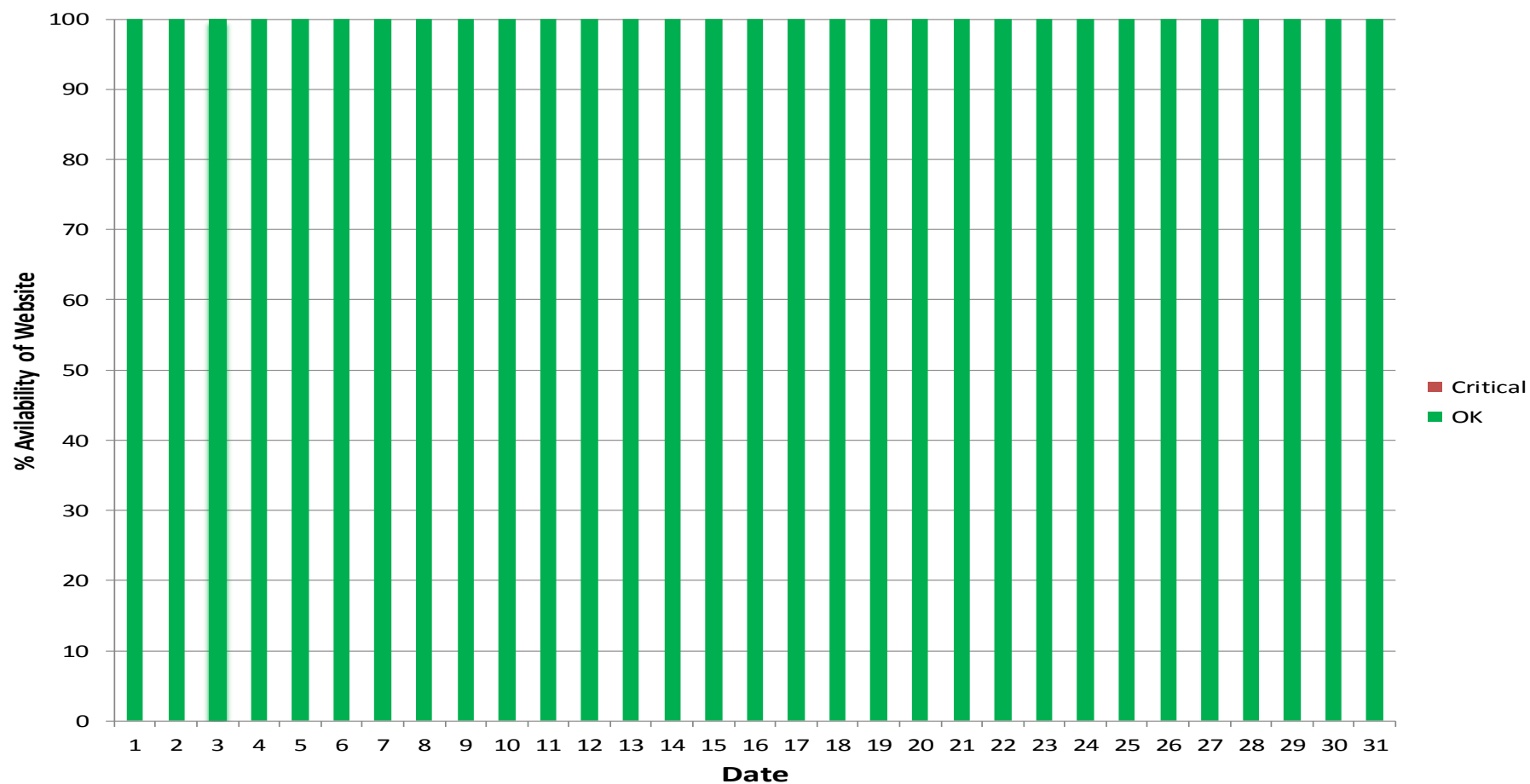
Key Applications

Summary: High level graphical view of Business Applications availability.

Observation: In July there were no significant issues.

Recommendation: Not applicable

WebStore Availability July 2013

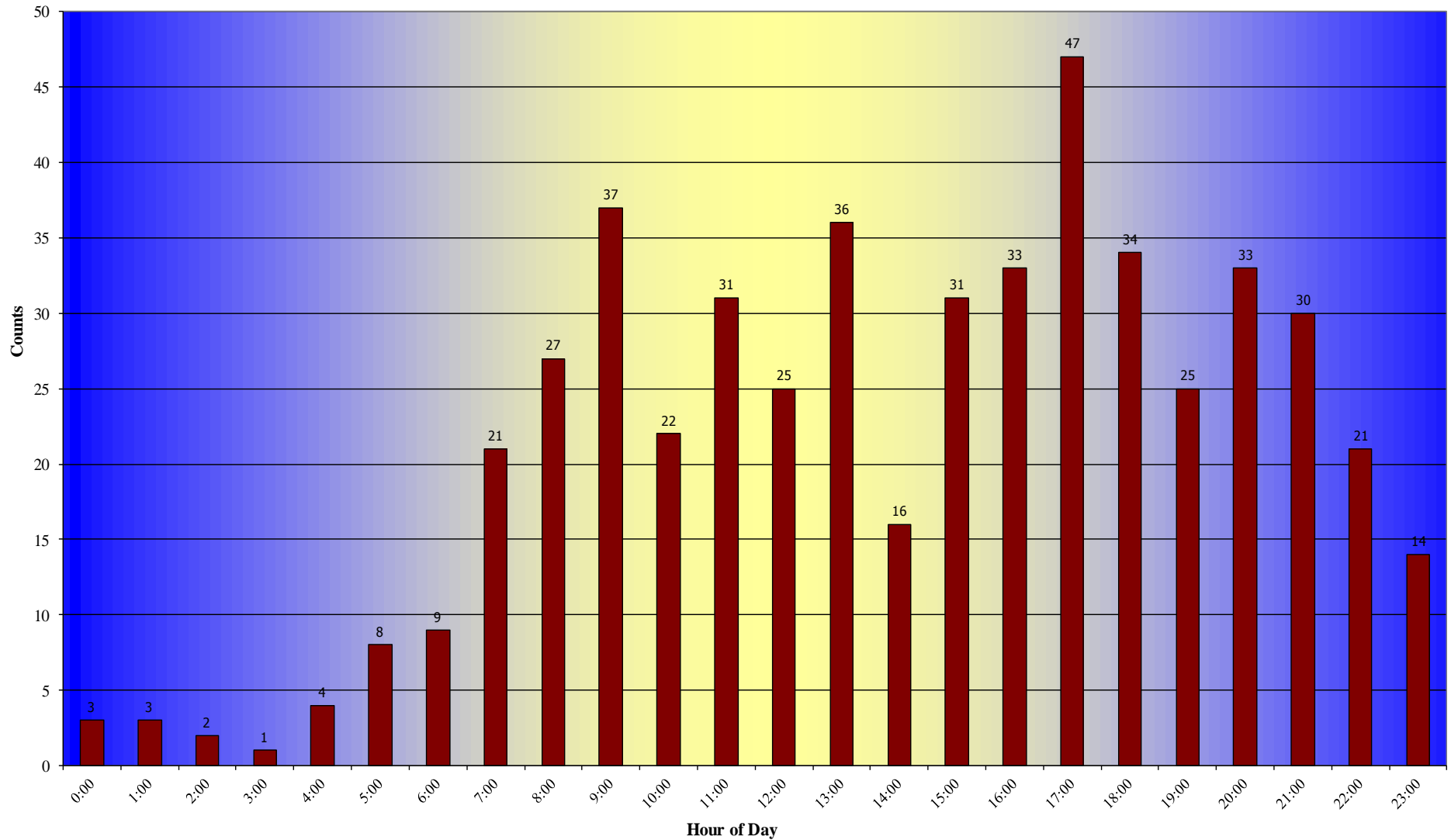


Summary: High level graphical view of Webstore's Availability for the month of July 2013.

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

Recommendation: Not applicable

Weekday Remote Access – July 2013

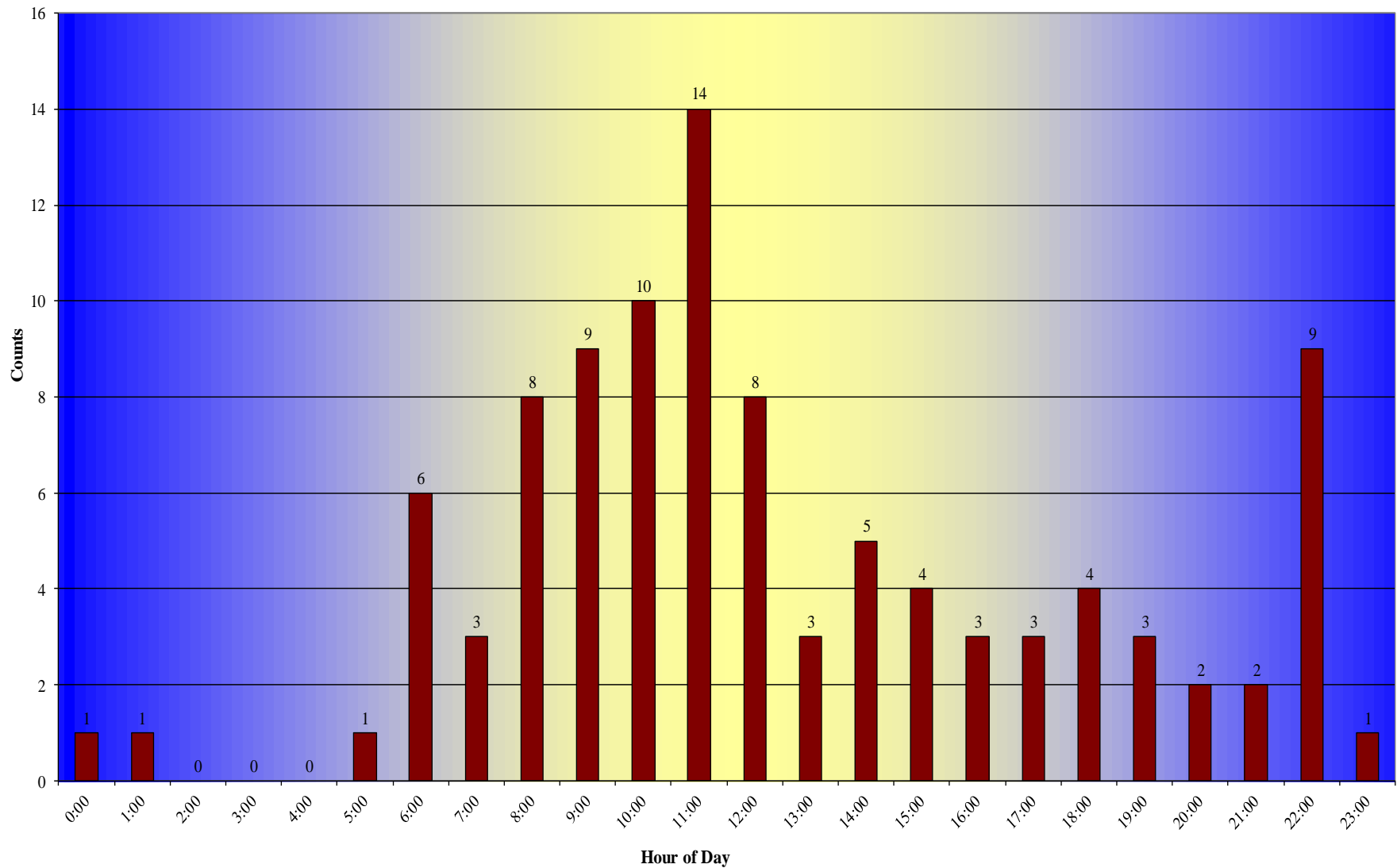


Summary: High level graphical view of Users remotely accessing Head Office resources in the Weekdays shown in hours of the day for the month of July.

Observation: More people accessing Head Office resources in the morning (6am – 9am) versus in the afternoon (between 5pm – 10pm). The high counts of users includes testing being done via Citrix Wireless Access.

Recommendation: Not applicable

Weekend Remote Access – July 2013

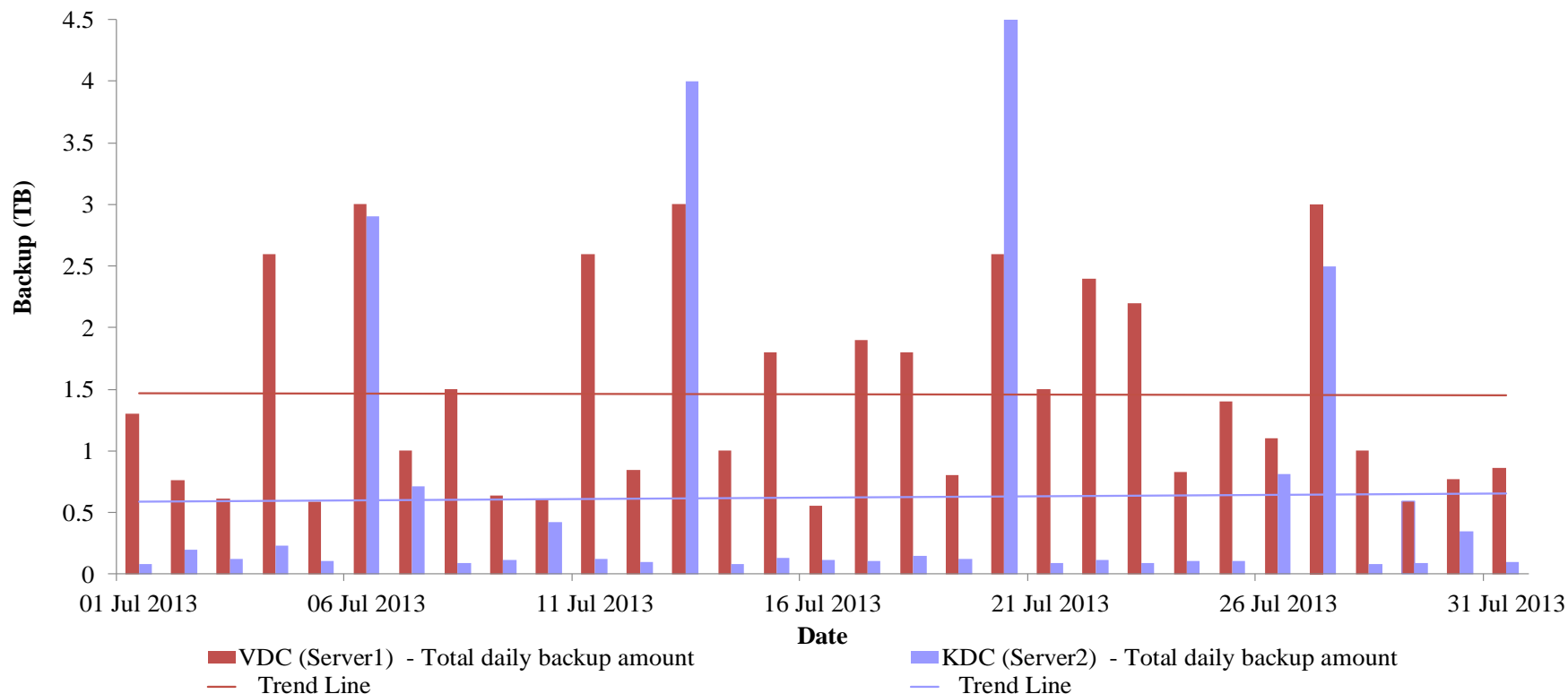


Summary: High level graphical view of Users remotely accessing Head Office resources on the Weekend shown in hours of the day for the month of July.

Observation: More people accessing Head Office resources in the Weekday vs. Weekend no matter which time of day.

Recommendation: Not applicable

Total Daily Backup Amount (TB) – July 2013



Summary:

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

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.

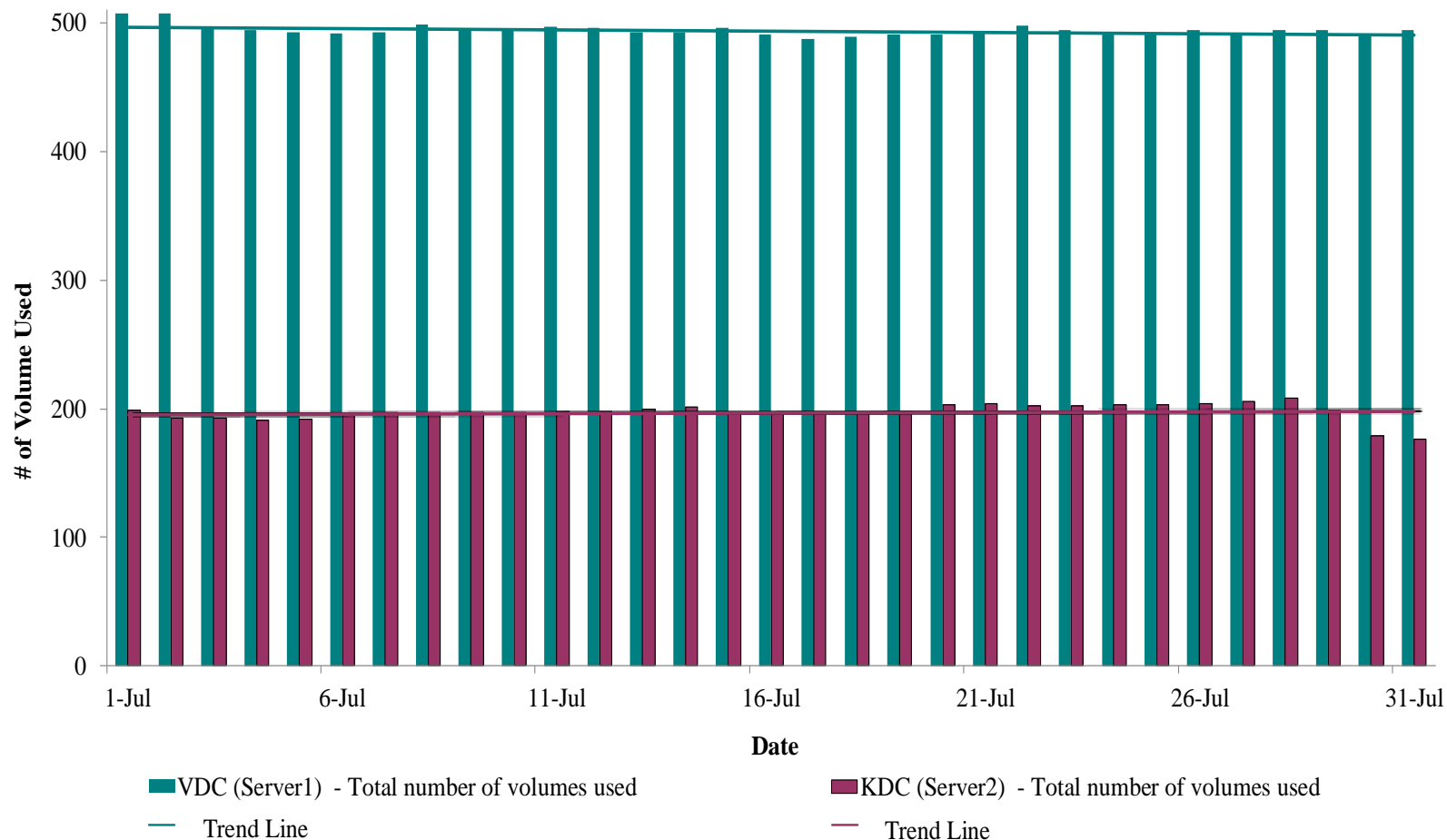
Observation:

On July 20th – Both KDC and VDC had over 7.4TB of SAN storage data backed up by TSM on to tape.

Recommendation:

Not applicable

Total Number of Volumes Used – July 2013

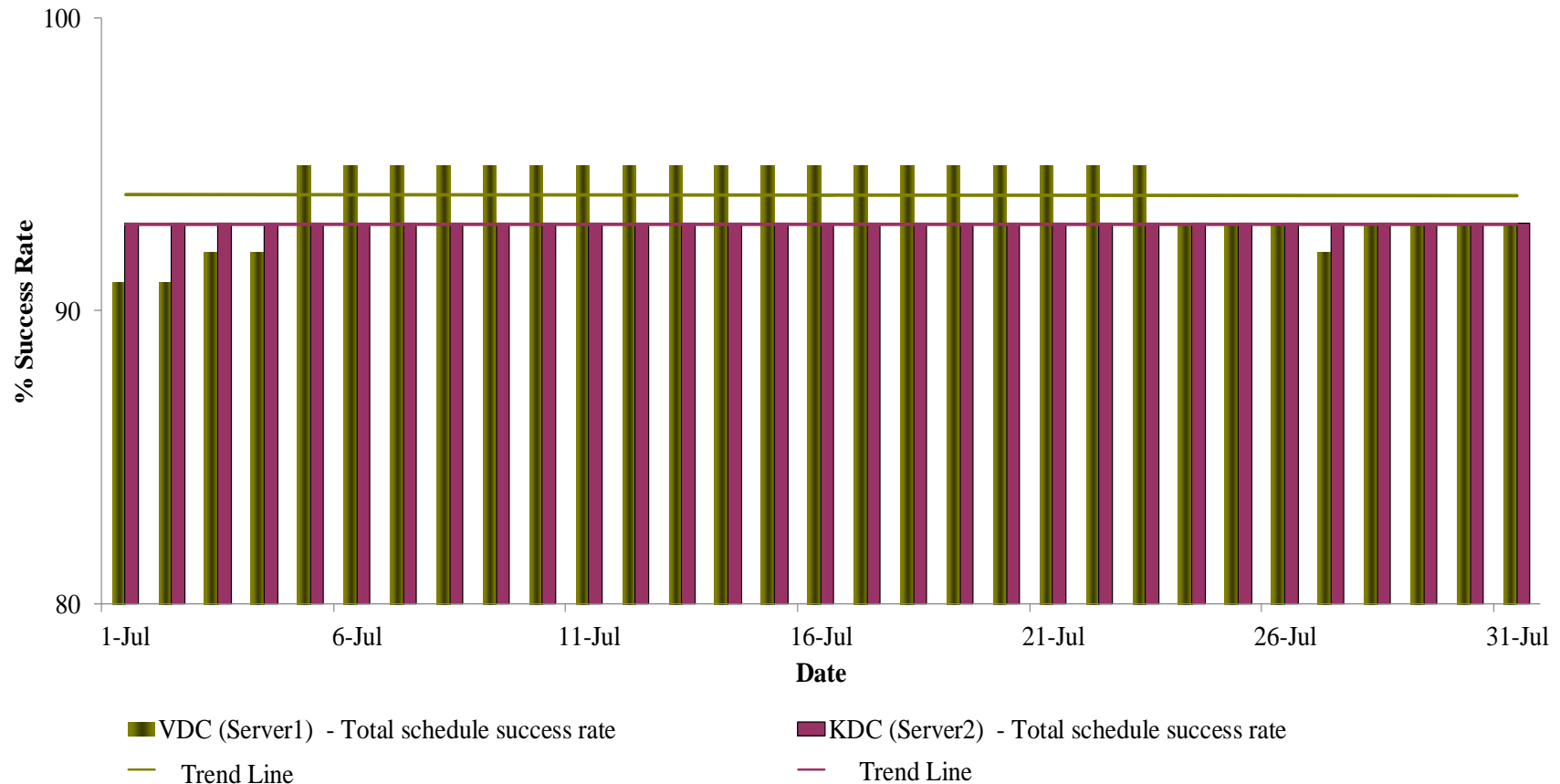


Summary: High level graphical view of TSM using the number of volumes in a day for the month of July.

Observation: The VDC library has 253 tape slots and 231 of them are in use. The KDC library has 125 tape slots and 107 of them are in use. This also includes Tapes that off site at Iron Mountain

Recommendation: Not applicable

Total Schedule Success Rate – July 2013

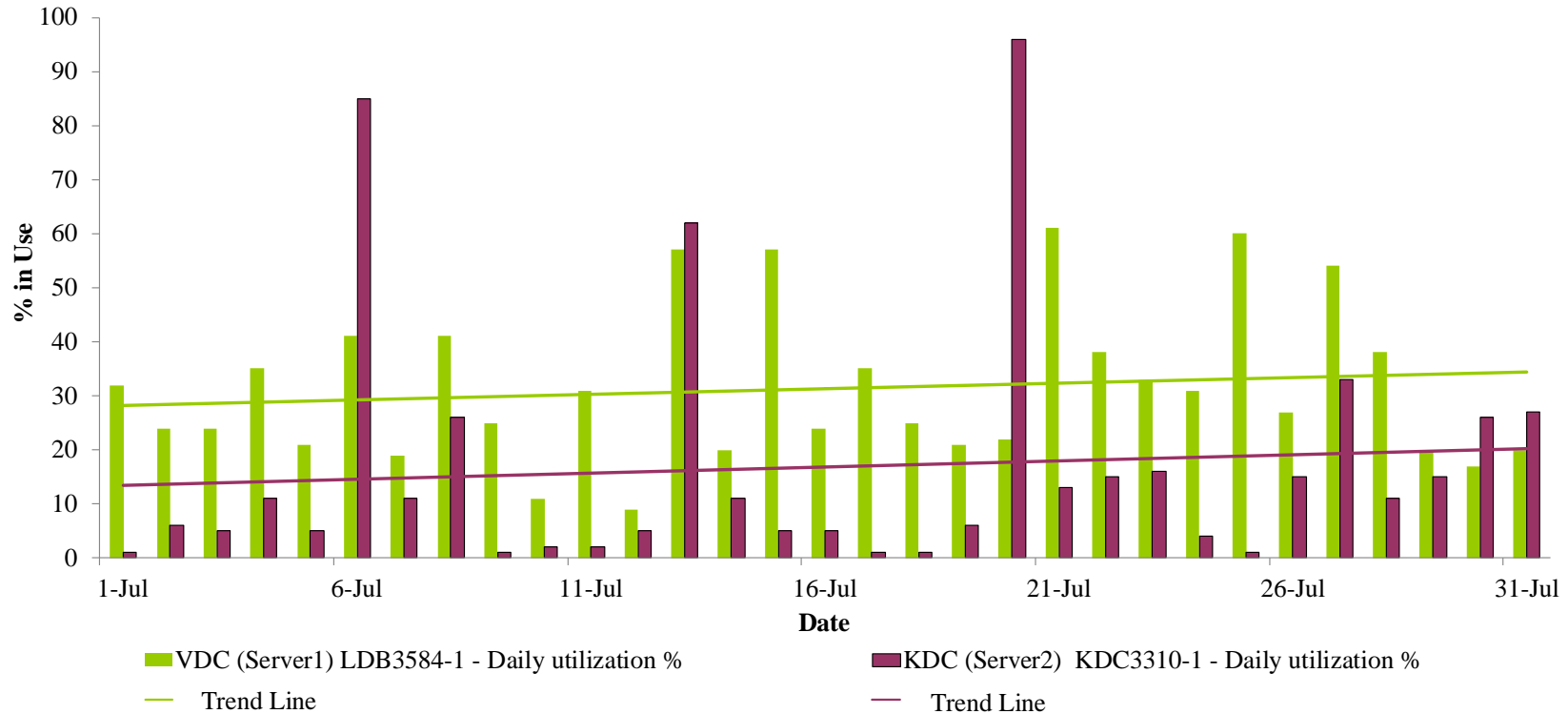


Summary: High level graphical view of TSM being successful in completing the backups on a daily basis for the month of July.

Observation: Continue to work on the resolution for the failures

Recommendation: Not applicable

Daily TSM Utilization (%) – July 2013



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

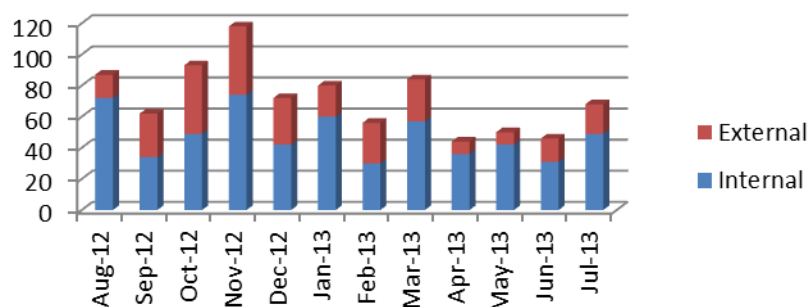
Observation: TSM is highly utilized on the weekends. Two times KDC TSM was more utilized versus VDC TSM.

Recommendation: Not applicable

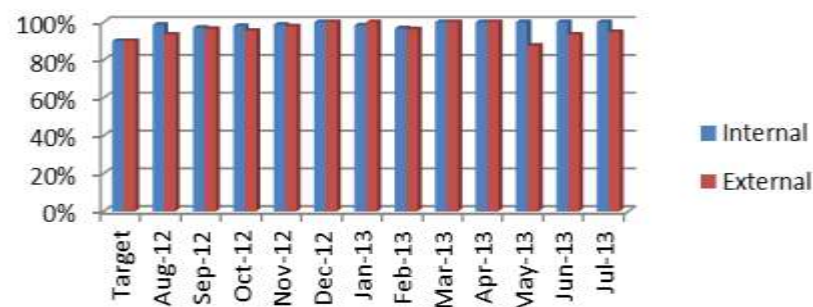
Network Service Statistics Summary

Totals	Target	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13
Tickets closed		87	62	93	118	72	80	56	84	44	50	46	68
Completed on time		85	60	90	116	72	79	54	84	44	49	45	67
% Completed on time	90%	98%	97%	97%	98%	100%	99%	96%	100%	100%	98%	98%	99%
Internal													
Tickets closed		72	34	49	74	42	60	30	57	36	42	31	49
Completed on time		71	33	48	73	42	59	29	57	36	42	31	49
% Completed on time	90%	99%	97%	98%	99%	100%	98%	97%	100%	100%	100%	100%	100%
External (SSBC service)													
Tickets closed		15	28	44	44	30	20	26	27	8	8	15	19
Completed on time		14	27	42	43	30	20	25	27	8	7	14	18
% Completed on time	90%	93%	96%	95%	98%	100%	100%	96%	100%	100%	88%	93%	95%

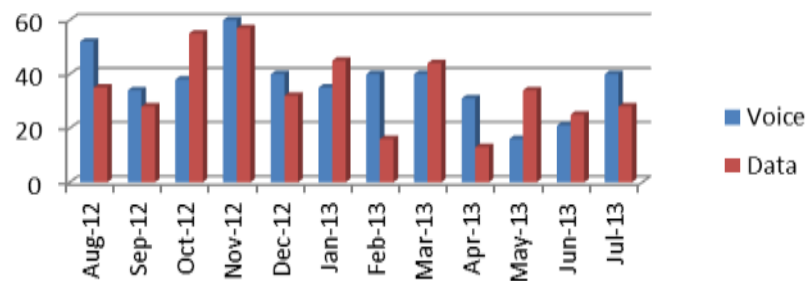
Tickets Closed



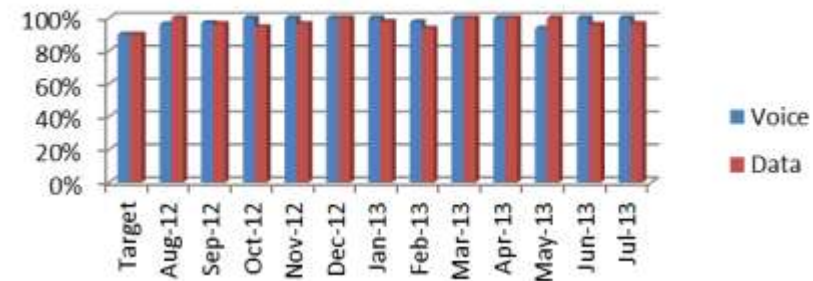
% Completed on Time



Tickets Closed by Type



% Completed on Time



Network Service Statistics Summary

Voice	Target	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13
Tickets closed		52	34	38	61	40	35	40	40	31	16	21	40
Completed on time		50	33	38	61	40	35	39	40	31	15	21	40
% Completed on time	90%	96%	97%	100%	100%	100%	100%	98%	100%	100%	94%	100%	100%
Internal													
Tickets closed		42	11	12	35	20	21	19	16	26	11	10	24
Completed on time		41	11	12	35	20	21	19	16	26	11	10	24
% Completed on time	90%	98%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
External (SSBC service)													
Tickets closed		10	23	26	26	20	14	21	24	5	5	11	16
Completed on time		9	22	26	26	20	14	20	24	5	4	11	16
% Completed on time	90%	90%	96%	100%	100%	100%	100%	95%	100%	100%	80%	100%	100%

[illegible]

Network Service Statistics

Head Office Details

HO Voice	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13
Tickets closed	48	20	29	48	30	22	31	32	27	13	15	34
Completed on time	46	20	29	48	30	22	31	32	27	12	15	34
% Completed on time	96%	100%	100%	100%	100%	100%	100%	100%	100%	92%	100%	100%
Internal												
Tickets closed	38	10	11	26	14	12	16	10	24	10	5	19
Completed on time	37	10	11	26	14	12	16	10	24	10	5	19
% Completed on time	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
External (SSBC service)												
Tickets closed	10	10	18	22	16	10	15	22	3	3	10	15
Completed on time	9	10	18	22	16	10	15	22	3	2	10	15
% Completed on time	90%	100%	100%	100%	100%	100%	100%	100%	100%	67%	100%	100%

HO Data	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13
Tickets closed	16	14	16	15	13	18	6	18	10	6	9	10
Completed on time	16	13	16	15	13	18	5	18	10	6	9	10
% Completed on time	100%	93%	100%	100%	100%	100%	83%	100%	100%	100%	100%	100%
Internal												
Tickets closed	14	13	16	12	9	17	6	17	8	5	9	9
Completed on time	14	12	16	12	9	17	5	17	8	5	9	9
% Completed on time	100%	92%	100%	100%	100%	100%	83%	100%	100%	100%	100%	100%
External (SSBC service)												
Tickets closed	2	1	0	3	4	1	0	1	2	1	0	1
Completed on time	2	1	0	3	4	1	0	1	2	1	0	1
% Completed on time	100%	100%	0%	100%	100%	100%	0%	100%	100%	100%	0%	100%

Network Service Statistics

Branch Details

Branch Voice	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13
Tickets closed	4	14	9	13	10	13	9	8	4	3	6	6
Completed on time	4	13	9	13	10	13	8	8	4	3	6	6
% Completed on time	100%	93%	100%	100%	100%	100%	89%	100%	100%	100%	100%	100%
Internal												
Tickets closed	4	1	1	9	6	9	3	6	2	1	5	5
Completed on time	4	1	1	9	6	9	3	6	2	1	5	5
% Completed on time	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
External (SSBC service)												
Tickets closed	0	13	8	4	4	4	6	2	2	2	1	1
Completed on time	0	12	8	4	4	4	5	2	2	2	1	1
% Completed on time	0%	92%	100%	100%	100%	100%	83%	100%	100%	100%	100%	100%

[illegible]

Network Service Statistics

Response Date	Due	Incident	Location	Category	Reason for late Completion
09-Jul-12	29-Jun-12	488930	Head Office	Voice	Static issue on phone lines.
12-Jul-12	05-Jun-12	484285	Head Office	Voice	Static issue on phone lines.
12-Jul-12	04-Jul-12	489536	Head Office	Voice	Delay in getting access to first aid room.
16-Jul-12	30-May-12	483316	Head Office	Data	Delay in getting approval for changes
01-Aug-12	27-Jul-12	488880	Store	Voice	Delay in getting phone line installed
10-Aug-12	07-Aug-12	495846	Head Office	Voice	Static issue on phone lines.
23-Aug-12	31-Jul-12	494094	Head Office	Voice	Static issue on phone lines.
24-Aug-12	02-Aug-12	489192	Store	Voice	Cutover of new phone lines was delayed
19-Sep-12	13-Sep-12	499313	Store	Voice	SSBC delay in removing service
24-Sep-12	12-Sep-12	501657	Head Office	Data	Ongoing discussions about naming delayed implementation
11-Oct-12	16-Aug-12	497487	Store	Data	Waiting for Eric Waterman, Security Technician, Corp Sec to visit store
30-Oct-12	19-Oct-12	505515	Store	Data	Required hub to be sent to store
31-Oct-12	18-Oct-12	500782	Store	Data	Delay in removing old ADSL circuit. New data line was installed on time.
21-Nov-12	09-Oct-12	505718	Store	Data	Ongoing pin pad issue. Ticket was closed and reopened several times. Problem finally determined to be an error in a DNS entry.
22-Nov-12	09-Nov-12	509552	Store	Data	Time needed to troubleshoot slow speed
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

End of Data Centre Chart Analysis

July 2013