



DoIT Operations Monthly Report

October 2019

Published November 14, 2019

DoIT OPERATIONS: AIS SERVICE AVAILABILITY

Service	Target	FY 2019				FY 2020		
		April	May	June	July	August	September	October
		%	%	%	%	%	%	%
API Manager	99.000%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Enterprise Content Management (ECM)	99.000%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Enterprise Service Bus (ESB)	99.000%	100.000	100.000	100.000	100.000	100.000	99.877	99.826
IAM	99.000%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Knowledgebase (KB)	99.000%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
My UW	99.000%	99.393	100.000	99.954	★ 95.639	100.000	99.189	99.950
NetID Login	99.900%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
One Time Password (UW Digital ID)	99.000%	100.000	100.000	★ 98.354	100.000	★ 97.514	100.000	99.995
Server Certificates (UW Digital ID)	99.000%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Shared Web Hosting	99.000%	99.566	99.169	★ 98.785	★ 96.002	99.879	99.781	100.000
Wisc Web	99.000%	99.566	99.169	★ 98.785	★ 96.002	99.879	99.781	100.000

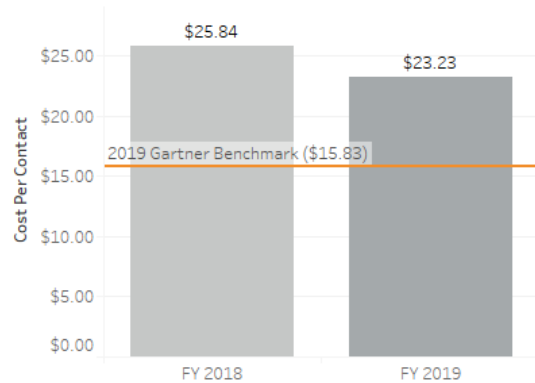
Target Colors
 ★ Below Target Above Target



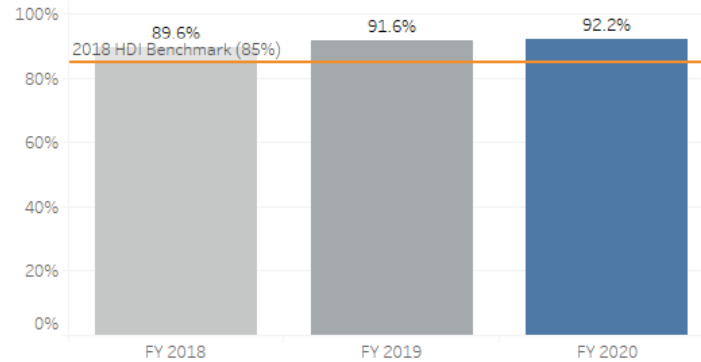
This visualization was created by DoIT in the Department of User Services.

DoIT OPERATIONS: US-HELP DESK OVERVIEW

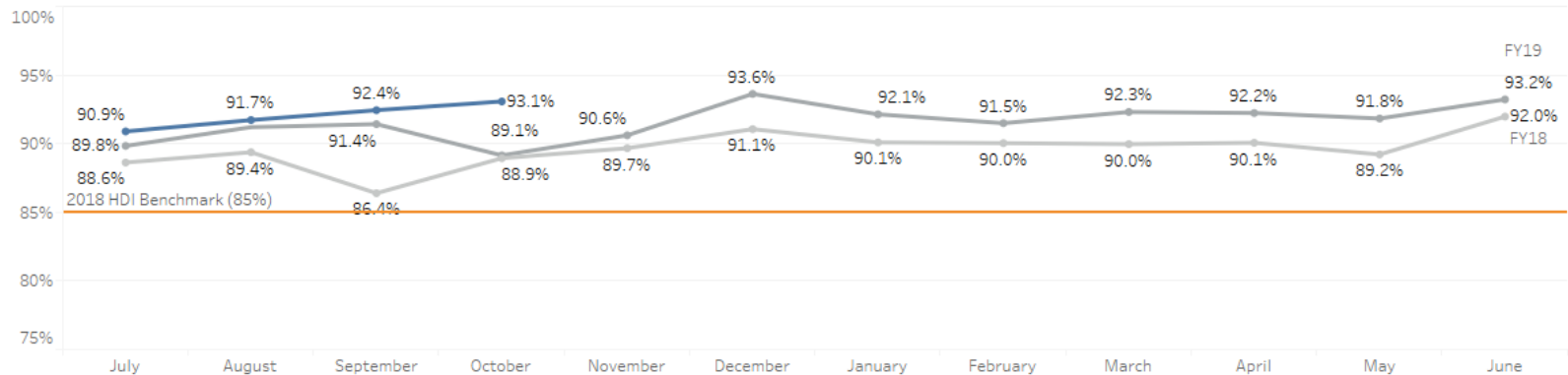
*Cost per Contact



**Customer Satisfaction



Customer Satisfaction



NOTES: Survey respondents rate satisfaction on a 7 point scale in response to: "We value your opinion. How was your experience with us?"

* FY19 will be used due to a six-month minimum to capture the 2019 Gartner benchmark.

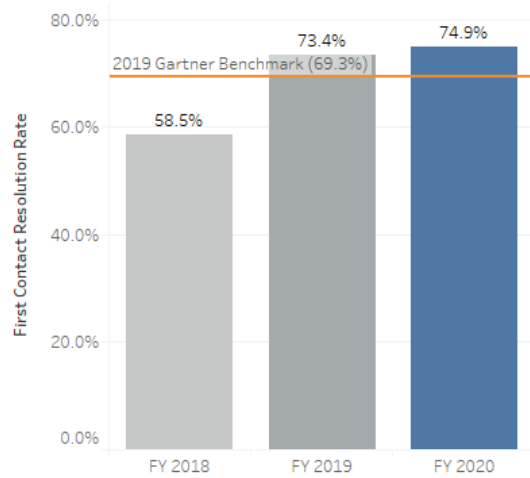
**2018 HDI Benchmark will be used until the release of the 2019 numbers.



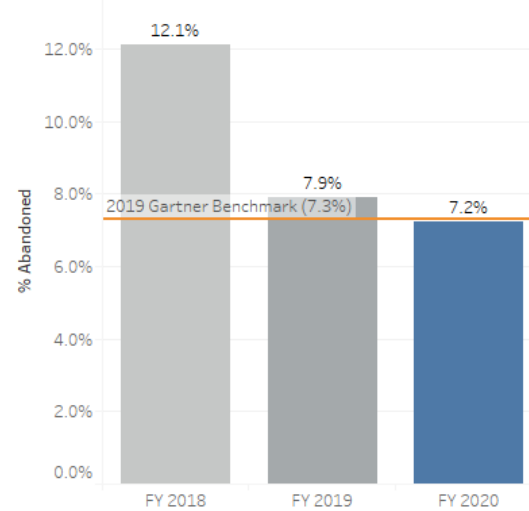
This visualization was created by the Department of User Services.



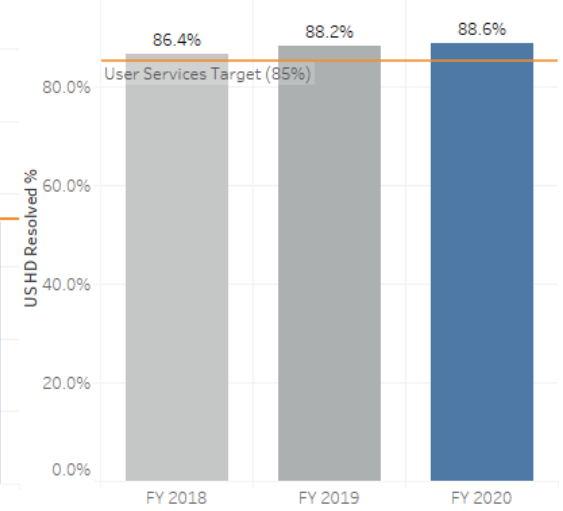
***Help Desk Average First Contact Resolution**



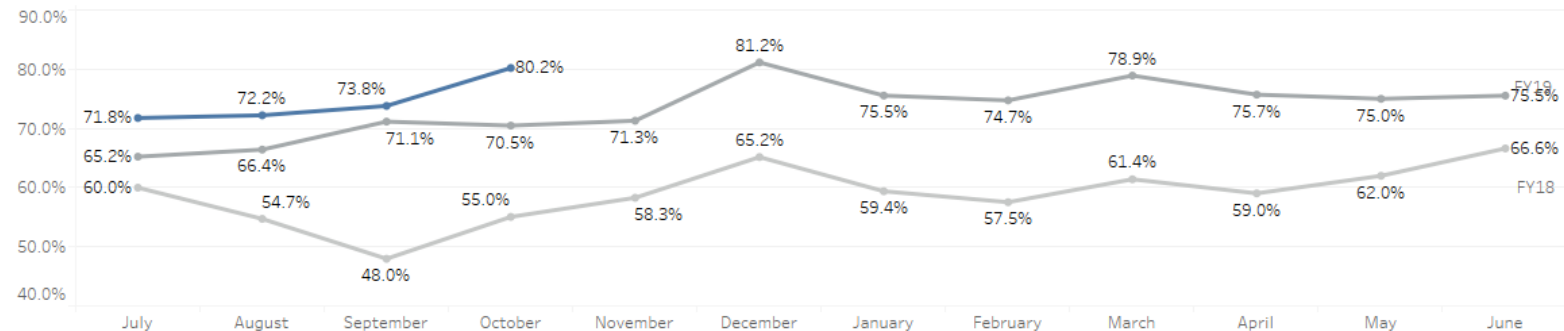
Help Desk Abandonment Rate



****Help Desk Average Resolution Rate**



Help Desk YOY First Contact Resolution



NOTES: *First Contact Resolution for Help Desk User Services has been defined as a phone incident opened by the Help Desk and resolved by the Help Desk, within one hour of the incident being created.

**Help Desk Average Resolution: defined as a phone incident opened anywhere and resolved by the Help Desk.



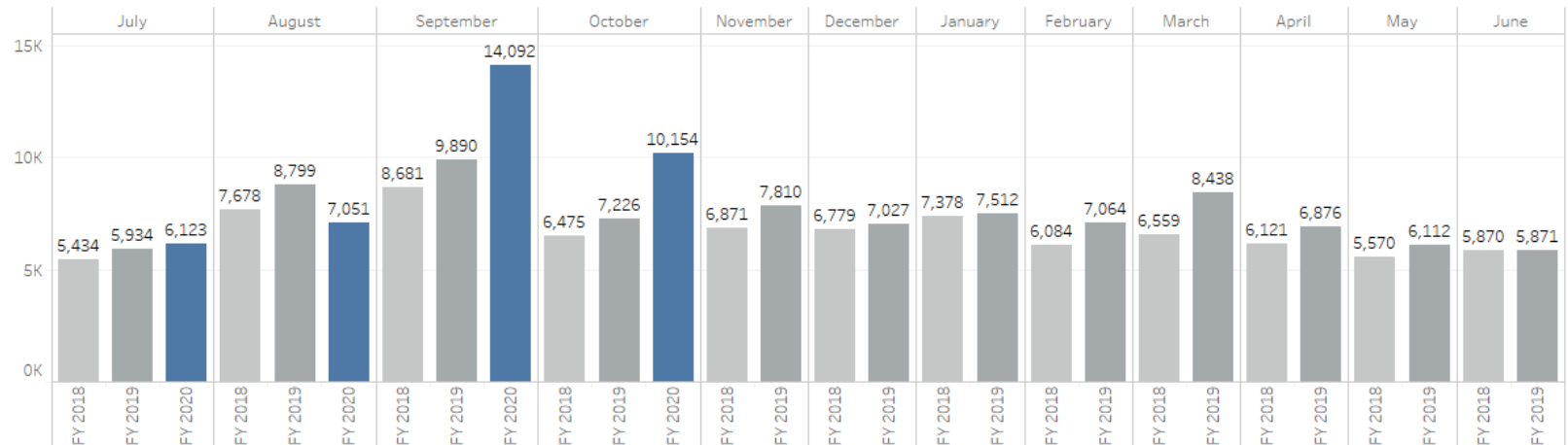
This visualization was created by DoIT in the Department of User Services.

* Help Desk Resolution Rates for Top 10 Supported-Services

October	All Incidents	% of Incidents	HD Resolved	** HD % Resolved
Multi-factor Authentication (MFA)	2,898	28.5%	2,833	97.8%
NetID Account Management	1,259	12.4%	1,213	96.3%
BadgIRT (Security)	1,252	12.3%	1,143	91.3%
Office 365	730	7.2%	673	92.2%
REFERRALS	536	5.3%	532	99.3%
PERSONAL SOFTWARE SUPPORT	257	2.5%	249	96.9%
Campus Network	220	2.2%	107	48.6%
VoIP	207	2.0%	136	65.7%
Learn@UW - Canvas Madison	196	1.9%	154	★ 78.6%
Device Repair	168	1.7%	99	★ 58.9%

2019 Gartner Benchmark- First Contact Resolution
 ★ Below 69.3% ■ At or above 69.3%

Help Desk Annual Contacts



NOTES: * Walk-in incidents are included for only FY20 to reflect the Walk-in & Help Desk merger

**Resolution Percentage = incidents resolved by tier 1 or tier 2 support (instead of escalating to a specific service team)

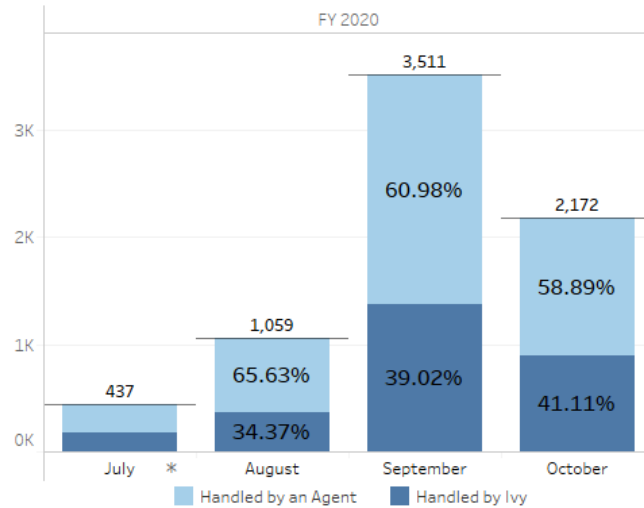


This visualization was created by DoIT in the Department of User Services.



DoIT OPERATIONS: US-HELP DESK IVY SUMMARY

Number of Chat Contacts



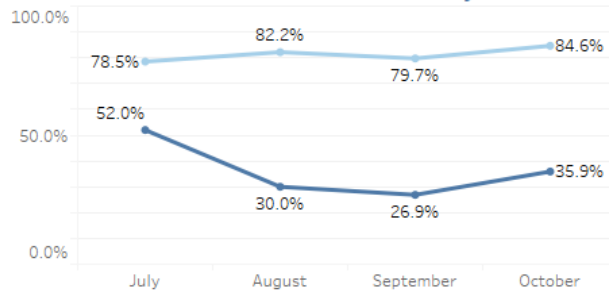
Hi there! I'm Bucky.

Average Ivy Chat Duration:
26.93 Mins

Top User Identified Services Ivy is Asked About

Service	Number of Chats	% of Total Chats
Other	4,128	57.49%
NetID issues	1,463	20.38%
MyUW (Student Center, Faculty Center, etc.)	537	7.48%
Office 365	417	5.81%
Learn@UW	209	2.91%
Departmental VIP Support	143	1.99%
Macintosh	96	1.34%
Windows	92	1.28%
Administrative Systems (SIS, e-Reimbursement, etc.)	51	0.71%
Product Info or Order Lookup	44	0.61%

Customer Satisfaction with Ivy Chats



All chats are first handled by the AI, Ivy. If the AI is unable to answer a question or a user requests to speak to an agent, then the chat will be handed off to an available agent. If an agent is not available an email incident is created from the chat and sent to the Help Desk email queue. The color indicates where the chat ended; either with an agent or with the AI.

NOTES: Ivy allows users to rate their conversations with both the AI and agents on a 5 point scale in response to: "How would you rate the quality of the interaction you just had with us?"

*Ivy went live on July 19th



This visualization was created by DoIT in the Department of User Services.



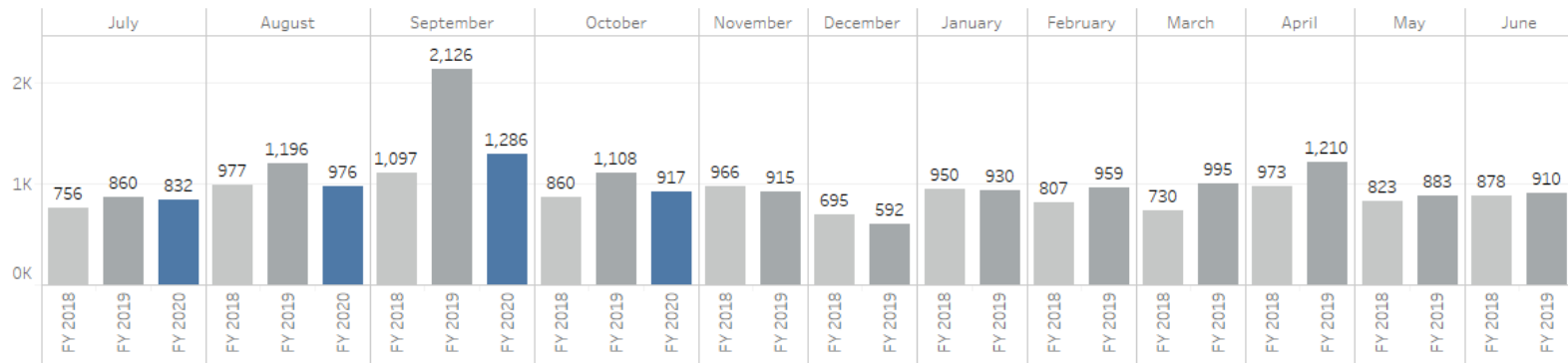
DoIT OPERATIONS: US-PRODUCTIVITY AND COLLABORATION SERVICES OVERVIEW

* Help Desk Resolution Rates for PCS Services During October

October	All Incidents	% of Incidents	** HD % Resolved	HD Resolved	First Contact Resolution Rate	*** Customer Satisfaction
Office 365	730.0	79.61%	92.2%	673.0	★ 66.2%	91.9%
UW-Madison Box	76.0	8.29%	67.1%	51.0	★ 52.6%	95.2%
WisList	31.0	3.38%	83.9%	26.0	★ 48.1%	100.0%
UW-Madison Google Apps	33.0	3.60%	81.8%	27.0	★ 68.4%	100.0%
Qualtrics	47.0	5.13%	91.5%	43.0	★ 59.9%	85.7%

2019 Gartner Benchmark-First Contact Resolution
★ Below 69.3% ■ At or above 69.3%

PCS Services Annual Help Desk Contacts



NOTES: *Walk-in incidents are included for only FY20 to reflect the Walk-in & Help Desk merger

**Resolution Percentage = incidents resolved by tier 1 or tier 2 support (instead of escalating to a specific service team)

***Survey respondents rate satisfaction on a 7 point scale in response to: "We value your opinion. How was your experience with us?"

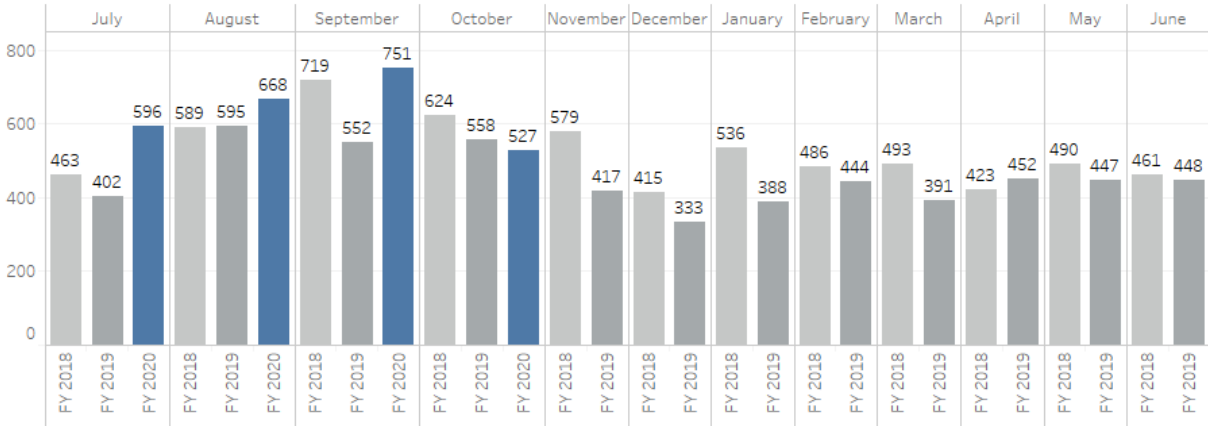


This visualization was created by the Department of User Services.

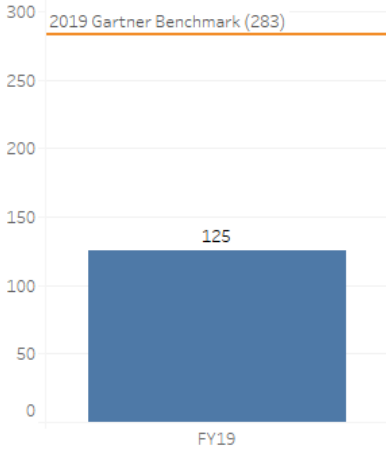


DoIT OPERATIONS: US-DEPARTMENTAL SUPPORT OVERVIEW

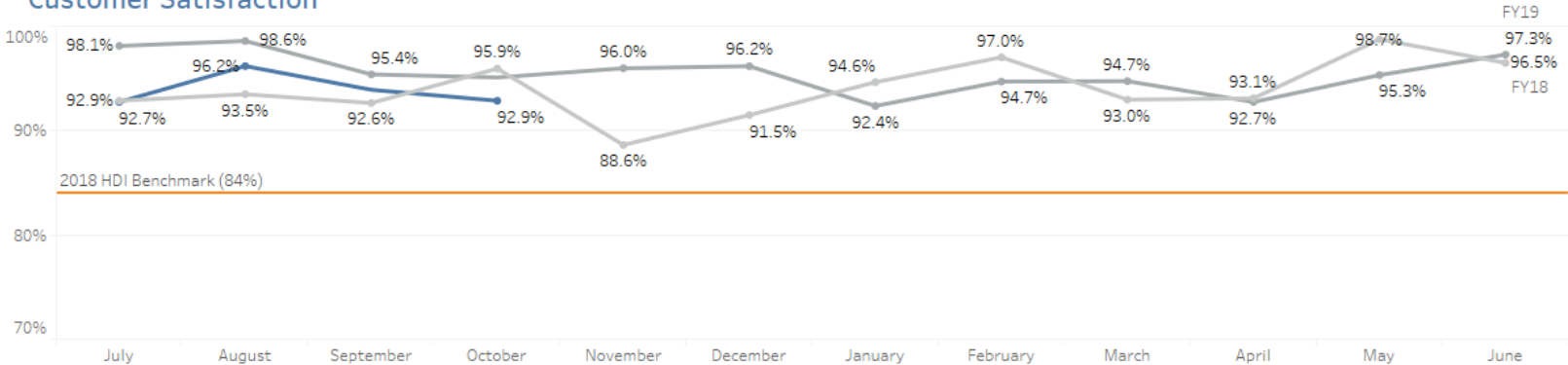
Departmental Support Annual Contacts



FY19 Endpoints Per Technician



Customer Satisfaction



NOTES: Survey respondents rate satisfaction on a 7 point scale in response to: "We value your opinion. How was your experience with us?"

7 Completely satisfied, 6 Mostly satisfied, 5 Somewhat satisfied, 4 Neither satisfied nor dissatisfied, 3 Somewhat dissatisfied, 2 Mostly dissatisfied, 1 Completely dissatisfied

This visualization was created by DoIT in the Department of User Services.



DoIT OPERATIONS: ENTERPRISE BUSINESS SYSTEMS OVERVIEW

EBS Selected Service Availability		FY 2019			FY 2020			
Service	Target	April	Q4 May	June	July	Q1 August	September	Q2 October
		%	%	%	%	%	%	%
HRS	99.000%	★ 98.002	100.000	★ 96.379	100.000	100.000	★ 88.610	100.000
HRS (Batch)	99.000%							
SFS	99.000%	100.000	100.000	99.710	100.000	100.000	100.000	99.564
SIS	99.000%	99.954	100.000	★ 98.934	★ 96.002	100.000	99.895	99.874
Informatica (FASTAR)	99.000%	100.000	99.320	100.000	100.000	100.000	100.000	100.000
UWBI (OBIEE)	98.000%	99.730	100.000	★ 97.354	100.000	100.000	100.000	100.000
Workload Automation	99.000%	100.000	100.000	99.950	100.000	100.000	100.000	100.000

Target Colors
 ★ Below Target ■ Above Target



This visualization was created by DoIT in the Department of User Services.

DoIT OPERATIONS: NETWORK SERVICES-WAN SERVICE AVAILABILITY

Network	Target	FY 2020			Network	Target	FY 2020			Network	Target	FY 2020		
		August %	September %	October %			August %	September %	October %			August %	September %	October %
Upham Woods	99.900%	100.000	100.000	★ 99.523	UW Platteville	99.900%	100.000	100.000	100.000	UWC Manitowoc	99.900%	100.000	100.000	100.000
UW Colleges Extension	99.900%	100.000	100.000	100.000	UW River Falls	99.900%	100.000	100.000	100.000	UWC Marathon Co.	99.900%	100.000	★ 99.566	100.000
UW Eau Claire	99.900%	100.000	100.000	100.000	UW Stevens Point	99.900%	100.000	100.000	100.000	UWC Marinette	99.900%	99.973	100.000	★ 99.693
UW Green Bay	99.900%	100.000	100.000	100.000	UW Stout	99.900%	100.000	100.000	100.000	UWC Marshfield Wood Co.	99.900%	100.000	100.000	100.000
UW Health	99.900%	100.000	100.000	100.000	UW Superior	99.900%	100.000	100.000	100.000	UWC Online	99.900%	100.000	★ 99.441	100.000
UW La Crosse	99.900%	100.000	100.000	100.000	UW Whitewater	99.900%	100.000	100.000	100.000	UWC Richland	99.900%	100.000	100.000	100.000
UW Madison	99.900%	100.000	100.000	100.000	UWC Baraboo Sauk Co.	99.900%	100.000	★ 99.827	99.953	UWC Rock Co.	99.900%	100.000	100.000	100.000
UW Milwaukee	99.900%	100.000	100.000	100.000	UWC Barron Co.	99.900%	100.000	100.000	100.000	UWC Sheboygan	99.900%	100.000	100.000	99.949
UW Oshkosh	99.900%	100.000	100.000	100.000	UWC Fond du Lac	99.900%	100.000	100.000	100.000	UWC Washington Co.	99.900%	100.000	100.000	★ 98.241
UW Parkside	99.900%	100.000	100.000	100.000	UWC Fox Valley	99.900%	100.000	100.000	100.000	UWC Waukesha	99.900%	99.980	100.000	100.000

Target Colors
 ★ Below Target ■ Above Target

-Availability is for wired (not wi-fi) connectivity at each institution. Availability calculated as total uptime / total time per month. Wide Area Network is considered down when completely disconnected from the system (i.e. both routers down at 4-year schools, the single router down at 2-year schools). Any planned outages are included in the calculations, sometimes making availability appear below commercial standards of 99.9% or 99.99% uptime.
 -The 99.9% SLA rate with UW System is for unplanned outages; the figures in this table include all outages – planned or unplanned. SLA faults here (highlighted in RED) may not actually be an SLA agreement fault.



This visualization was created by DoIT in the Department of User Services.

DoIT OPERATIONS: WAN SPEEDS - NETWORK SERVICES

IN

		19-Aug	19-Sep	19-Oct
UW-Madison campus	Avg (Gb/sec)	4.80	8.90	9.80
	Max (Gb/sec)	22.10	39.10	22.20
	Min (Gb/sec)	1.20	1.60	1.60
	% of full capacity (100Gbps)	4.80	8.90	9.80
UW-Madison research	Avg (Gb/sec)	25.80	32.40	27.80
	Max (Gb/sec)	72.80	74.40	66.30
	Min (Gb/sec)	5.80	5.30	8.80
	% of full capacity (100Gbps)	25.80	32.40	27.80
Internet Exchange (MadIX)	Avg (Gb/sec)	4.50	4.40	5.30
	Max (Gb/sec)	9.00	8.40	14.10
	Min (Gb/sec)	0.43	0.00	0.55
	% of full capacity (20Gbps)	22.50	22.00	26.50

OUT

		19-Aug	19-Sep	19-Oct
UW-Madison campus	Avg (Gb/sec)	4.80	8.90	9.80
	Max (Gb/sec)	22.10	39.10	22.20
	Min (Gb/sec)	1.20	1.60	1.60
	% of full capacity (100Gbps)	4.80	8.90	9.80
UW-Madison research	Avg (Gb/sec)	25.80	32.40	27.80
	Max (Gb/sec)	72.80	74.40	66.30
	Min (Gb/sec)	5.80	5.30	8.80
	% of full capacity (100Gbps)	25.80	32.40	27.80
Internet Exchange (MadIX)	Avg (Gb/sec)	4.50	4.40	5.30
	Max (Gb/sec)	9.00	8.40	14.10
	Min (Gb/sec)	0.43	0.00	0.55
	% of full capacity (20Gbps)	22.50	22.00	26.50

-Average (mean) network usage includes night and weekend readings of typically much lower traffic. Averages for UW-Madison Campus Internet Access and UW-Madison internet Exchange will likely be lower in summer months than they are during the academic year.

-95th percentile usage is a more common industry standard than avg/max/min for measuring utilization; Network Services is working on providing that measure as well in future reports.

A peering exchange, such as the Madison Internet Exchange, enables networks to interconnect directly to each other and exchange IP (Internet) traffic. Peering is the exchange between two independent networks for the benefit of both networks.

-The target for WAN speeds is a capacity threshold instead of a specified speed to maintain. When 95th percentile speeds reach about 45-55% of capacity, there is an engineering exploration to determine the cause of increased usage and whether increased capacity is warranted.

This visualization was created by the Department of User Services.

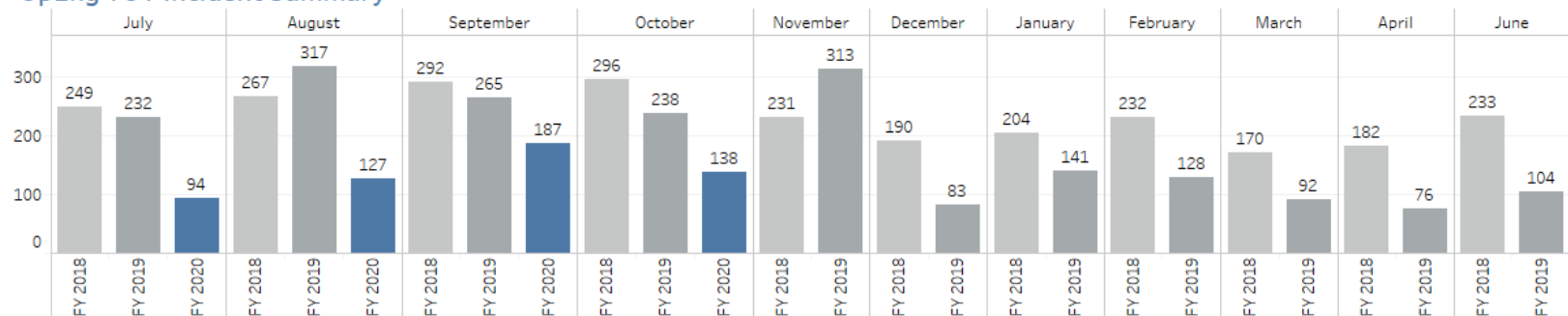


DoIT OPERATIONS: OPERATIONS ENGINEERING INCIDENT SUMMARY

Four Months Incident Summary by Subcategory

Category	Subcategory	FY 2020			
		July	August	September	October
Campus Network	AANTS	8	9	9	15
	Bandwidth Threshold Alarm			1	
	Firewall/Content ID	1			
	Firewall/Problem	1	1	6	2
	Firewall/Rules	6	10	2	5
	Port Error Threshold Alarm	2	2	2	4
	Request/Data Jack/Activation	5	4	4	2
	Request/Data Jack/Installation	2	2	1	1
	Request/DHCP	2	1	6	8
	Request/DNS/Hostmaster	3	2	5	
	Request/DNS/Network Services	8	13	9	15
	Request/Equipment Installation	1	1	2	
	Request/Hardware	6	3	8	8
	Request/IP Allocation	24	24	24	18
	Request/New Installation (wired/wireless)	7	2	1	1
	VPN	6	2	12	11
	Wired Network Issue	6	8	9	9
	Wireless	11	9	19	17
	Wireless Device Registration	1	1	3	1
Campus Network Housing	Device Registration HAP		19	49	15
	HAP Reset		8	3	3
	Submit Incident		1	1	
Departmental VPN	Submit Incident	1	2	9	3
	eduroam Setup		2		
Software	Submit Incident		1	1	
	Other (Standard)			1	
VoIP	Feedback			1	
Grand Total		94	127	188	138

OpEng YOY Incident Summary



NOTES: Incident counts are pulled directly from WiscIT (Powered by Cherwell) as incidents touched by the OpEng Team

This visualization was created by DoIT in the Department of User Services.



DoIT OPERATIONS: SYSTEMS ENGINEERING AND OPERATIONS SERVICE AVAILABILITY

Service	Target	FY 2019			FY 2020			
		April %	May %	June %	July %	August %	September %	October %
Bucky Backup	99.000%	99.865	99.811	100.000	99.735	100.000	100.000	100.000
Campus Card Access	99.500%	100.000	99.977	100.000	99.909	99.908	99.678	100.000
Campus Computing Infrastructure	99.500%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Life Safety, Environmental Control, Fire Alarm Monitoring	99.900%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
MS SQL Shared Hosting	99.000%	99.450	100.000	100.000	100.000	100.000	100.000	100.000
PCI	99.500%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Report Distribution (Cypress)	98.000%	★ 94.790	★ 97.350	★ 97.350	99.982	98.123	★ 96.224	99.377
Select Agent	99.900%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Storage	99.900%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Video Monitoring System	99.900%	100.000	100.000	100.000	100.000	100.000	100.000	100.000
WiscIT (Cherwell)	99.500%	100.000	99.840	100.000	99.959	★ 97.774	99.863	★ 99.018

Target Colors
 ★ Below Target Above Target



This visualization was created by DoIT in the Department of User Services.

DoIT OPERATIONS: SOLUTIONS ENGINEERING SYSTEMS MANAGEMENT SUMMARY

	SLA % Availability	Availability % of Total Time	Number of Servers Managed	Customer Requests	Servers per FTE	Gartner Average Servers/FTE
Windows	99.950	99.440	381	91	152.4	63.3
Linux	99.950	99.999	414	139	165.6	47.4

Top Customers By Percentage of Labor Hours

DoIT - Public Cloud Service	1	(6.93%)
Enrollment Management (SIS)	2	(6.21%)
HRS	3	(2.37%)
DoIT - Report Distribution	4	(2.12%)
DoIT - Identity and Access Management	5	(1.72%)
DoIT - Enterprise Storage	6	(1.54%)
DoIT - Service Management	7	(1.49%)
SFS	8	(1.06%)
DoIT - Microsoft SQL Server Hosting	9	(0.91%)
Cybersecurity - Security Information and Event Management	10	(0.83%)

Top Customers By Server Count

SFS, HRS	1	(72 Servers)
Cybersecurity	2	(68 Servers)
Identity and Access Management	3	(60 Servers)
Learn@UW	4	(47 Servers)
Student Information System	5	(43 Servers)
AIS - Web Platform Services	6	(42 Servers)
Database Aggregation (FASTAR)	7	(27 Servers)
Office 365	8	(26 Servers)
Network Services	9	(21 Servers)
Campus Active Directory	10	(21 Servers)



This visualization was created by DoIT in the Department of User Services.

DoIT OPERATIONS: SOLUTIONS ENGINEERING VULNERABILITIES SUMMARY

Four Months Vulnerability Summary

Type	Severity	FY 2020			
		July	August	September	October
Potential Vulnerability	1	8	3	4	2
	2	3	4	2	
	3	65	49	13	12
	4	3			
	5			1	
Vulnerability	1	1	1	1	177
	2	140	303	114	17
	3	2,167	3,273	464	672
	4	2,161	1,521	2,200	817
	5	1,357	1,548	58	275
Vulnerability or Potential Vulnerability	3	16			1
	4	43	5		61
	5	2	2	3	6
Grand Total		5,966	6,709	2,860	2,040

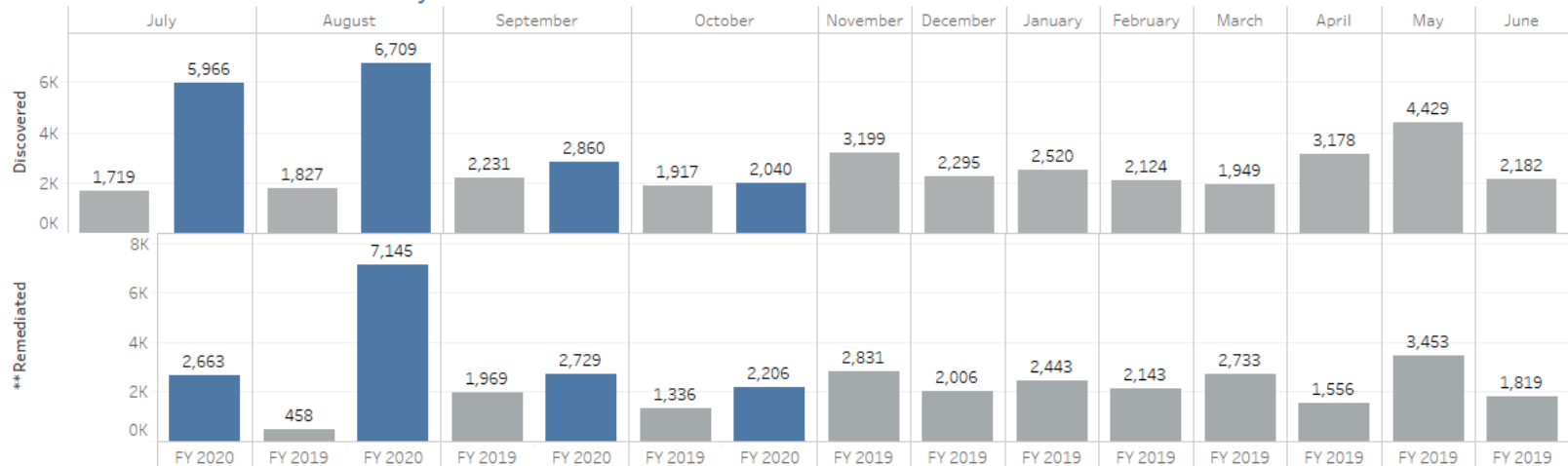
*Active & Urgent Vulnerabilities

54

Remaining From September

2

SEO YOY Vulnerabilities Summary



NOTES: Data in this visualization is pulled directly from Cherwell

Remediated data is currently not available prior to August 2018

* refers to the number of active vulnerabilities with a severity of 4 or 5.



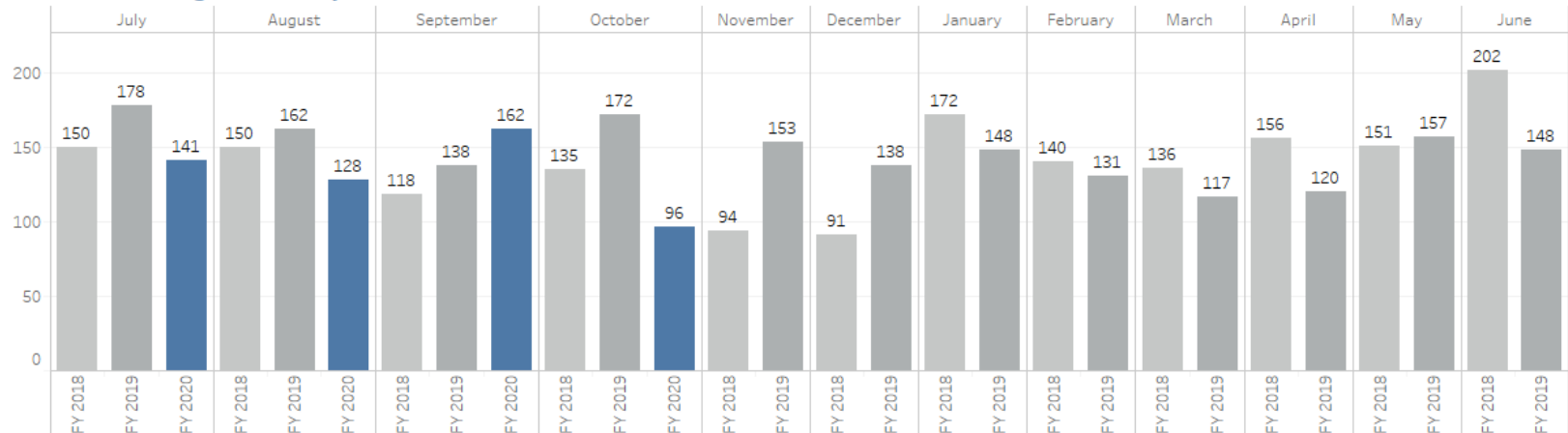
This visualization was created by DoIT in the Department of User Services.

DoIT OPERATIONS: SYSTEMS & NETWORK CONTROL CENTER

Four Months Network Problem Summary

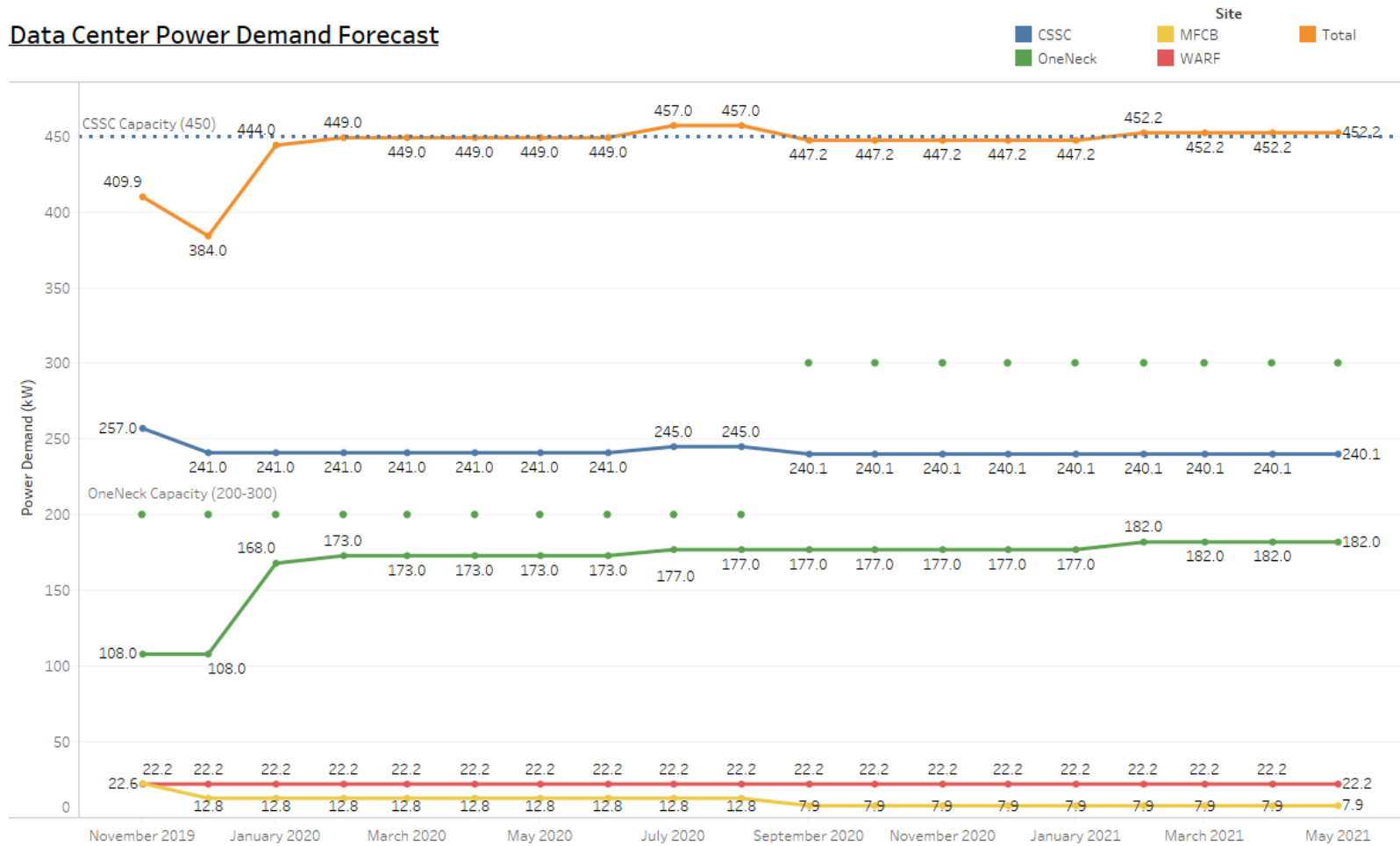
Category	FY 2020			
	July	August	September	October
Boreas	16	14	10	9
Campus Network	105	69	85	56
MUFN	5	1	5	1
Northern Tier	4	6		
UW SysNET	13	14	10	6
Grand Total	143	104	110	72

SEO YOY Outage Summary



This visualization was created by DoIT in the Department of User Services.

Data Center Power Demand Forecast



-OneNeck footprint is trending up as WIPAC (IceCube) continues its evacuation of 222 W. Washington and we shift more of our mission-critical systems Site A to OneNeck.

-CSSC footprint is trending up significantly due to research storage, CyberSecurity Elastic servers, and updates to Select Agent and other infrastructure.

-WARF is being evacuated through attrition.

-MFCB will slightly decline as we propose to move Select Agent Site B from MFCB to OneNeck, pending Network Services design.



This visualization was created by the Department of User Services.

Metrics Report Monthly Updates

1. **SEO-Vulnerabilities:** Number of Active & Urgent Vulnerabilities added and the Number of Remaining Vulnerabilities discovered in the previous month.
2. **NS-WAN Speeds:** Targets added.
3. **EBS Overview:** Some services have been moved to the page of the team that owns them and EBS Targets have been updated to match the inclusion of both planned and unplanned outages.
4. **DS-Overview:** Endpoints Per Technician has been added.
5. **SolEng-SEO:** Ranking by labor is now in the form of percent of total labor hours.

DoIT OPERATIONS: TECHNICAL NOTES

HD: Walk-in created incidents are considered Help Desk incidents beginning in FY20 due to the merger between former Tech Store (Service Desk) and the Help Desk that began on July 1st, 2019.

HD-Overview: *Cost per contact* FY19 will be used due to a six month minimum to calculate the gartner benchmark. 2018 HDI Benchmarks will be used until the release of 2019 numbers.

HD-Benchmark Details: *First Contact Resolution* for Help Desk User Services has been defined as an incident opened by the Help Desk and resolved by the Help Desk, within one hour of the incident being created.

HD-Ivy: All chats are first handled by the AI, Ivy. If the AI is unable to answer a question or a user requests to speak to an agent, then the chat will be handed off to an available agent. If an agent is not available an email incident is created from the chat and sent to the Help Desk email queue. The color indicates where the chat ended; either with an agent or with the AI.

DS-Overview: Total number of endpoints that have been verified via IBM BigFix: within the past 45 days as of 11/5/2019

SEO-Service Availability: New services were added in March & April 2019

Active & Urgent Vulnerabilities: Number of active vulnerabilities with a severity of 4 or 5

Category Definitions

NetID Account Management: Password resets and NetID change requests

Office 365: Support for @wisc.edu email and Microsoft Apps

UW C/EX Support: Any incident from a Colleges or Extensions user

Referrals: Unsupported services referred to other departments

General Departmental Support: Incidents from departmentally supported users

BadgIRT: Incidents regarding security disabled accounts

Point of Sale (Tech Store): Any incident regarding the Tech Store

Campus Network: Connectivity issues to UW-Net and device registration

Learn@UW - Canvas Madison: Support to UW-Madison students & staff with Canvas

Multi-Factor Authentication (MFA): Support to UW-Madison students, faculty, and staff with the MFA



This visualization was created by DoIT in the Department of User Services.