



## IT Information & Technology



Status Report Presented to the Board of Education on March 24, 2021

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# IT Summary of Previously Completed Work (before September 2020)



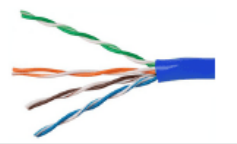
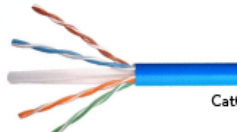
- Wireless expansion
- 1:1 Chromebook deployment

## Example of 1 existing issue with completed work:

This work needed to be completed quickly in order to prepare for hybrid instruction. Work went well. During the crunch of the weeks preceding September, time constraints prevented proper wiring and as a result existing old category 5 wiring from classrooms was redirected to wiring these access points. This limits the wireless capabilities throttling the access points.



New access points with 1gbps capability limited by old wiring running at 100mbps

TYPE	SPEED	CABLE	CABLE IMAGE
Fast Ethernet	10/100Mbps	Cat5	
Gigabit Ethernet	10/100/1000Mbps	Cat5e/Cat6a	





# IT Summary of Current Activities: Part 1 Investigation



- **Network & Infrastructure Review**  
switching, routing, servers, wiring, LAN/WAN
- **Classroom Technology & Device Review**  
computers, smart boards (interactive displays), peripherals, hybrid set up, etc.
- **IT services, BOCES/LHRIC and Staffing Review**  
services, vendors, and IT staffing
- **Platforms/Apps/Software Review**  
active applications and systems by North Salem users



- **Accounts Review**

user accounts, access and permissions (particularly active directory and Google)

- **Systems Integration Review**

automation, integration and inter-departmental collaboration

- **Staff & Remote (family) User Support Review**

IT support for all employees and remote and hybrid households

- **Security and Ed Law 2d/Part 121 Review**

compliance with law, identification of gaps and action plan to address gaps including the National Institute of Science & Technology's Cybersecurity Framework (NIST CSF). See next slide.



# NIST Cyber Security Framework and Gaps

## NIST CYBERSECURITY FRAMEWORK



Education Law 2-d requires educational agencies to adopt a policy on data security and privacy that aligns with the NIST Cybersecurity Framework, or NIST CSF. **At the center of the NIST CSF is the Framework Core, which is a set of activities and desired outcomes designed to help organizations manage data security and privacy risk.** Districts will use the Target Profile, Current Profile, and Action Plan, described below, to apply these activities. To learn more about this requirement, agencies will review the NYS K-12 Target Profile, supplemental resources and Part 121.5 of the Regulations.

## MAIN COMPONENTS OF THE CYBERSECURITY FRAMEWORK

### NIST FRAMEWORK CORE



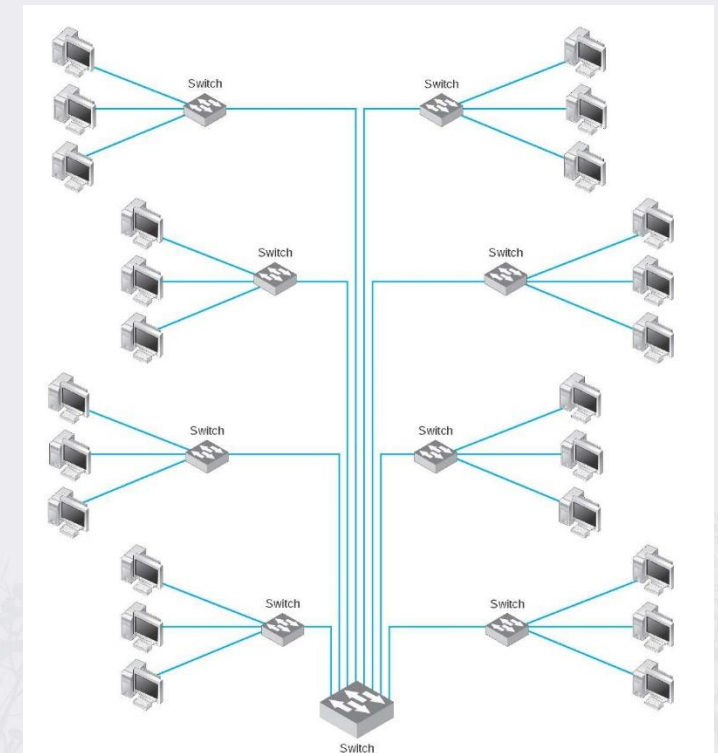
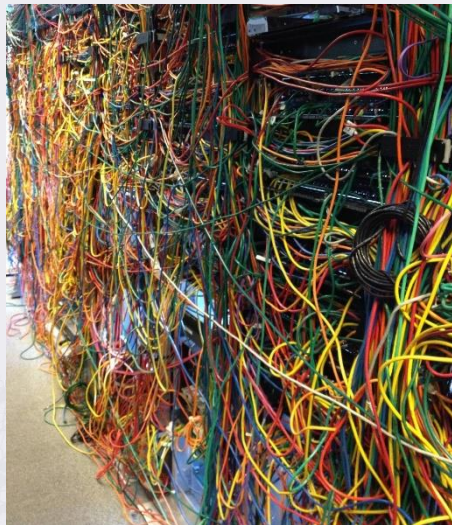
The Core is a set of **SPECIFIC ACTIVITIES TO MANAGE DATA SECURITY AND PRIVACY RISK.** The Core is organized into functions, categories, and subcategories.

IDENTIFY	ASSET MANAGEMENT 	ENVIRONMENT 	GOVERNANCE 	RISK ASSESSMENT 	RISK MANAGEMENT 	SUPPLY CHAIN 
PROTECT	IDENTITY MANAGEMENT 	AWARENESS AND TRAINING 	DATA SECURITY 	INFORMATION PROTECTION 	MAINTENANCE 	PROTECTIVE TECHNOLOGY 
DETECT	ANOMALIES AND EVENTS 	SECURITY MONITORING 	DETECTION PROCESSES 			
RESPOND	RESPONSE PLANNING 	COMMUNICATION 	ANALYSIS 	MITIGATION 	IMPROVEMENTS 	
RECOVER	RECOVERY PLANNING 	IMPROVEMENTS 	COMMUNICATION 			



## ■ Network & Infrastructure Review

**Gaps** include: Wiring & fiber, data closets, EoL (end-of-life) switches, server EoS (end-of-support), and single point of failures





## ■ Classroom Technology & Device Review

computers, smart boards (SBs-interactive displays), peripherals, hybrid set up, etc.

**Gaps** include EoL devices & SBs, inconsistent classroom setup and preparedness.





# IT Identified “Gaps” and Current Initiatives and Work



- Review of IT services, BOCES/LHRIC and staffing services, vendors, IT staffing

worked with administrative council and district office to review IT vendor agreements and IT contracts, including IT services provided by LHRIC & BOCES. Alignment of services with District needs and possible changes identified.







# IT Identified “Gaps” and Current Initiatives and Work



## ■ Platforms/Apps/Software

active applications and systems by North Salem users

**Gaps** include appropriate licensing, integration and utilization





# IT Identified “Gaps” and Current Initiatives and Work



## ■ Accounts

User accounts, access and permissions

**Gaps** include account maintenance and provisioning. As an example: when a user ends their relationship with the District, it is critical to make sure their account disabled.

Active Directory Users and Computers

Name	Type	Description
Laura Tarabay	User	
Liam Christensen	User	
Michael Sande	User	
Moiz Bandukwala	User	
MSOL_3d4f350bde95	User	Account created by Micr
Nicholas Cancian	User	
Nicholas Waddington	User	
Oliver Karam	User	
Pascal Mitri	User	
Pedro Mello	User	Operations Coordinator
PM CA	Security Group - Global	
Protected Users	Security Group - Global	Members of this group a
RAS and IAS Servers	Security Group - Domain Local	Servers in this group can
Read-only Domain Controllers	Security Group - Global	Members of this group a
Rolen Pouranviah	User	



## ■ Systems Integration

Automation, integration and inter-departmental collaboration

**Gaps** systems are manually maintained with little or no automation/integration

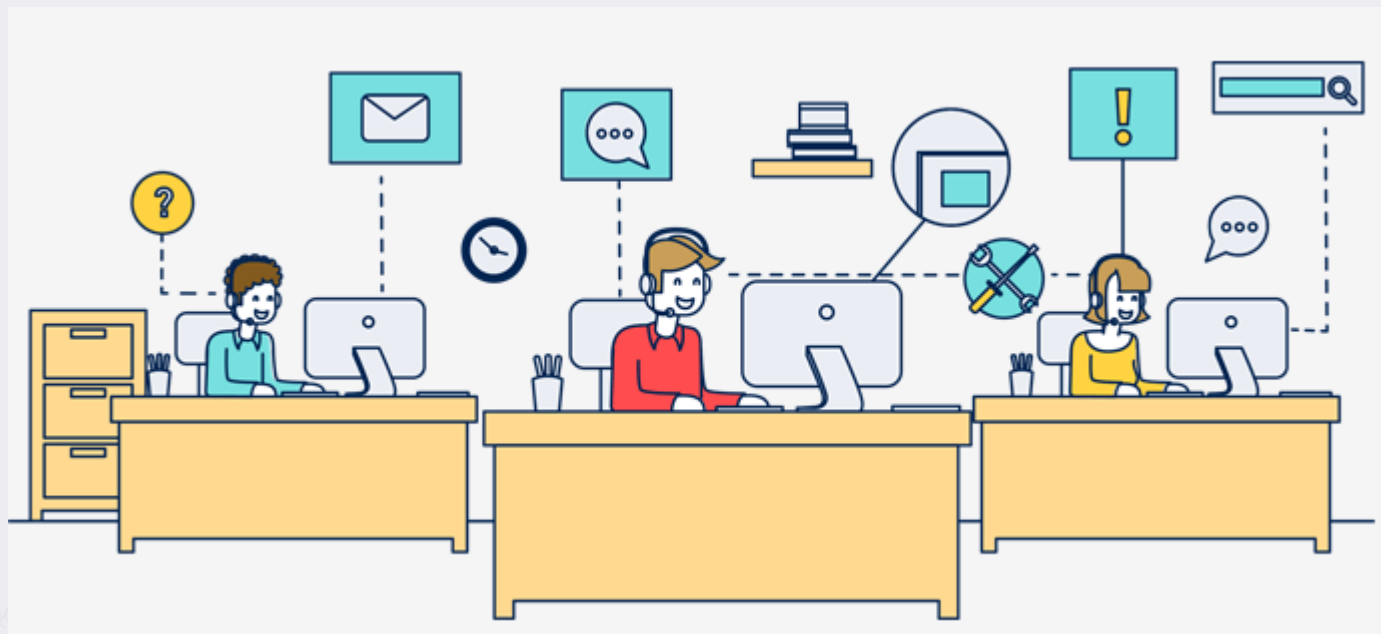




## ■ Staff & Remote (family) User Support

IT support for all employees and remote and hybrid households

**Gaps** robust IT support for staff, remote, hybrid learners & their families needs improvement

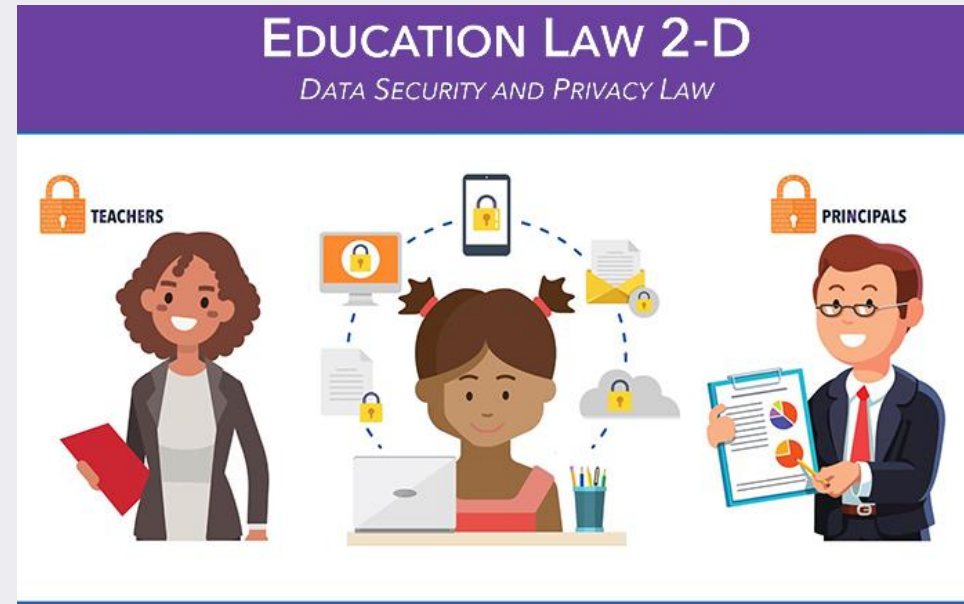




## ■ Security and Ed Law 2d/Part 121

compliance with law, identification of gaps and action plan to address gaps including the National Institute of Science & Technology’s Cybersecurity Framework (NIST CSF)

Gaps were indicated on preceding slides



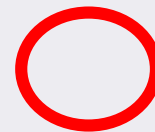



# IT Work Completed or In-Progress, Part 2 Remediation



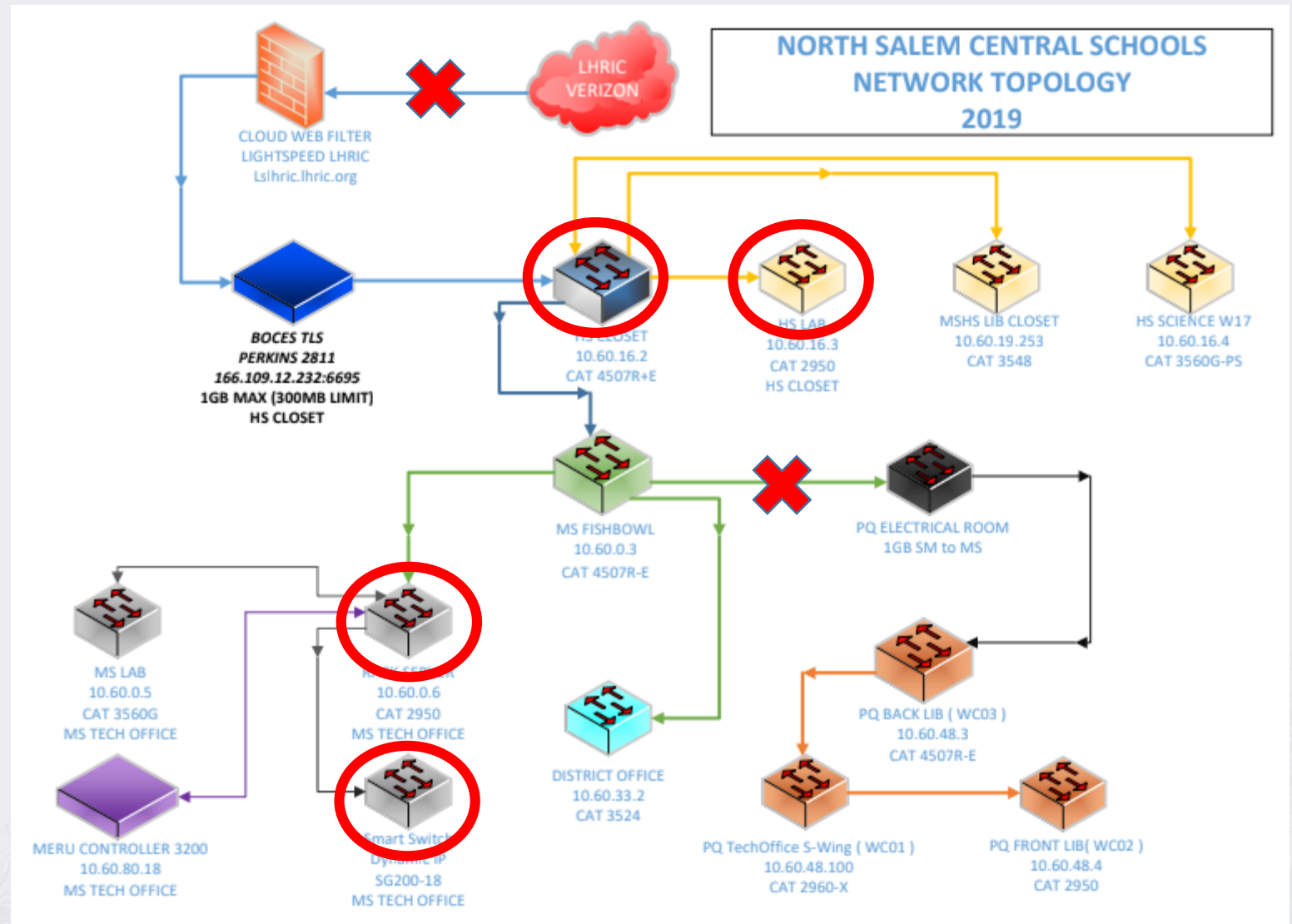
## Network switching upgrades and Infrastructure

Plan to replace EoL network switches as part of SSBA and e-rate.

 EoL switch (SSBS & e-rate)

 Single point of failure, fiber (future)

Infrastructure, mostly wiring part of capital project





## IT Work Completed or In-Progress, Part 2 Remediation



- EoL SBs (interactive displays) to be replaced as part of SSBA.
- Chromebook refresh as part of SSBA.
- Computer & laptop refresh occurring now.
- EoL network switches to be replaced in near future as part of e-rate and SSBA.
- Server and active directory upgrades in progress with April ETA.
- Proper resale or electronics recycling of EoL equipment.
- Systems modernization in process and includes: ClassLink, IT help desk, migration and formalization of IT process & procedures.



## IT Work Completed or In-Progress, Part 2 Remediation



- Security and Ed Law 2d: ensuring proper data backups and review of network security, incident reporting, disaster recovery and detail review of NIST CSF. In addition, all of these tasks help fulfill our Ed Law 2d requirements.
- Inter-departmental collaboration such as work with transportation to migration to secure cloud-based solution with integration. Benefits include automation, security and disaster recovery.
- Systems integration for account provisioning and management providing improved security, automation and improved user (staff & students) IT experience.



# Ed Law 2d, Part 121 and NIST CSF **example** email



## Ransomware & Phishing

Ransomware and phishing have been serious cybersecurity threats for some time now, but it appears they will remain the primary cyber risks of 2021. [Click here](#) to read more.

## Cyber Attacks

- [Go malware is now common, having been adopted by both APTs and e-crime groups](#)
- [Is Your Browser Extension a Botnet Backdoor?](#)
- [Digital self-harm: What to do when kids cyberbully themselves](#)
- [SolarWinds Officials Throw Intern Under the Bus for 'solarwinds123' Password Fail](#)
- [Ransomware Attacks Soared 150% in 2020](#)
- [Microsoft: Chinese Cyberspies Used 4 Exchange Server Flaws to Plunder Emails](#)
- [Three Top Russian Cybercrime Forums Hacked](#)
- [Nearly 30,000 Macs reportedly infected with mysterious malware](#)
- [These four new hacking groups are targeting critical infrastructure, warns security company](#)

## Cybersecurity

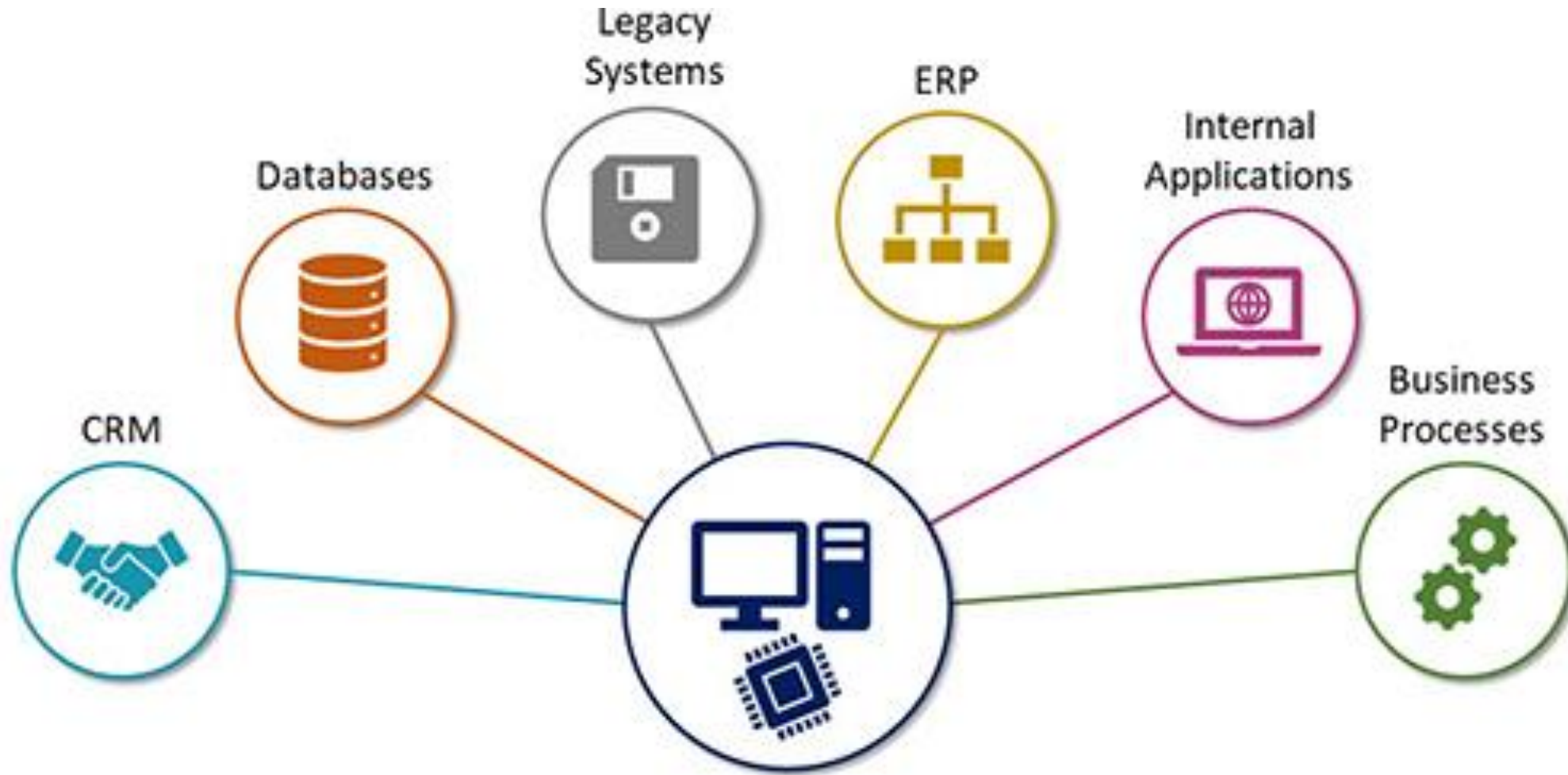
- [Go Update Your Passwords Right Now](#)
- [These Are The States Most At Risk For Ransomware Attacks](#)
- [How to Design a Foolproof IoT Cybersecurity Strategy](#)
- [Code-execution flaw in VMware has a severity rating of 9.8 out of 10](#)
- [What exactly am I supposed to do to protect information? Does the CCPA provide a specific security standard?](#)
- [National Lab Creates Technology to Detect Cryptocurrency Mining Malware](#)

## Data Breach

- [Canada: Evidence of Harm Required To Advance Class Action Following Data Breach](#)
- [Data is most at risk on email, with 83% of organizations experiencing email data breaches](#)
- [Same cyber threats, better solutions as impact of data breaches skyrocketed in 2020](#)
- [Kroger advises customers of a data breach affecting pharmacy and Little Clinic](#)
- [California DMV suffers data breach after contractor struck by ransomware attack](#)



# Educational Systems Integration





# North Salem Central School District



General Fund (A)

Function 2630 (Instructional Technology)

Objects of expenditures:

- 100 series – salaries
- 200 series – equipment
- 400 series – contractual
- 450 series – supplies
- 460 series – software
- 490 series – BOCES/LHRIC

## Information & Technology (IT) Budget

Adopted 2020-21 Budget	Proposed 2021-22 Budget	\$ Change	% Change
\$ 835,075	\$ 945,225	\$ 110,150	13.19%
Increases due to DoT position and software.			

[Proposed 2021-2022 Technology – link to PDF Report from nVision](#)



Questions

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Answers

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**Thank you!**