Ad 09

Domino Fitness. Time for a Health Check
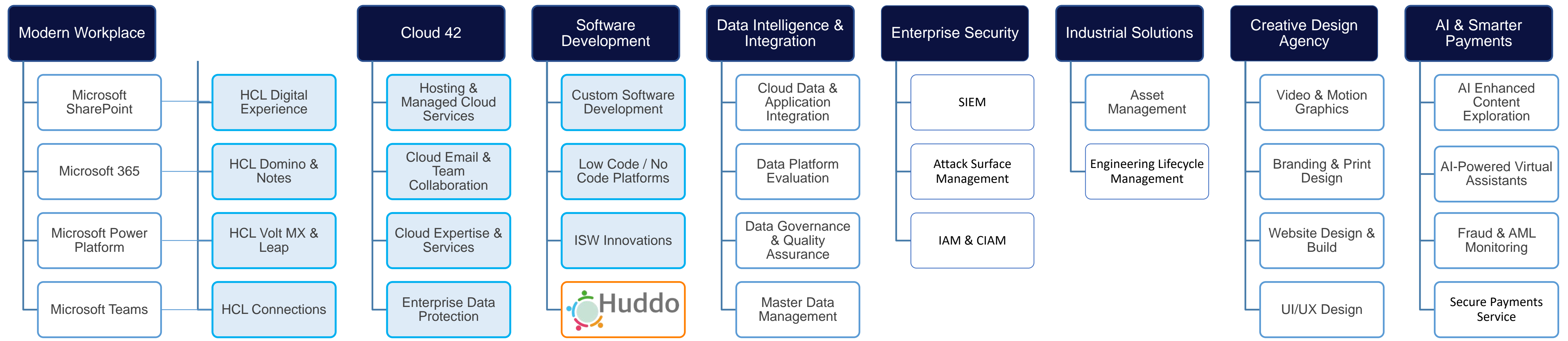
Jared Roberts

Are you Domino Fit?

Head of Digital Solutions – ISW

- Melbourne, Australia
- Consulting background:
  - Notes, Domino, Connections, Sametime, WAS, Portal (DX)
  - Analytics, Integration, Architecture
  - Strategy, Digital Transformation
- Lifelong metal musician
- BBQ enthusiast
- Amateur beer brewer
- Terrible at most sports

Think of this exercise as an annual check-up at the doctor.

Your body will run even if you:

- Feed it bad food

- Never exercise

- Ignore small issues and warnings of bigger problems
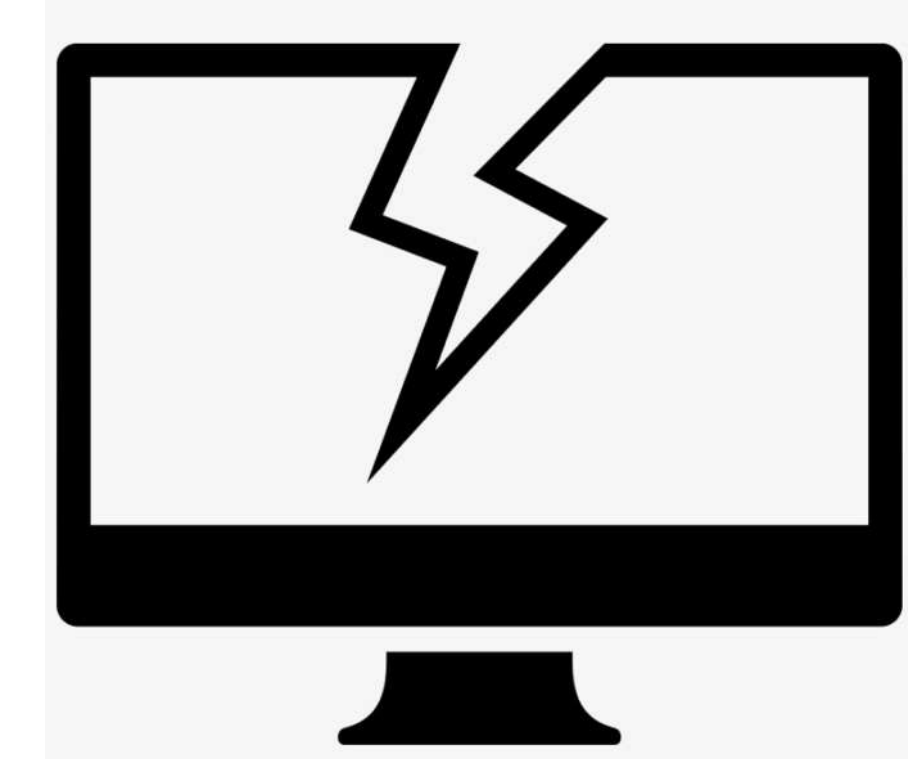
- Regularly visit the Amsterdam coffee shops
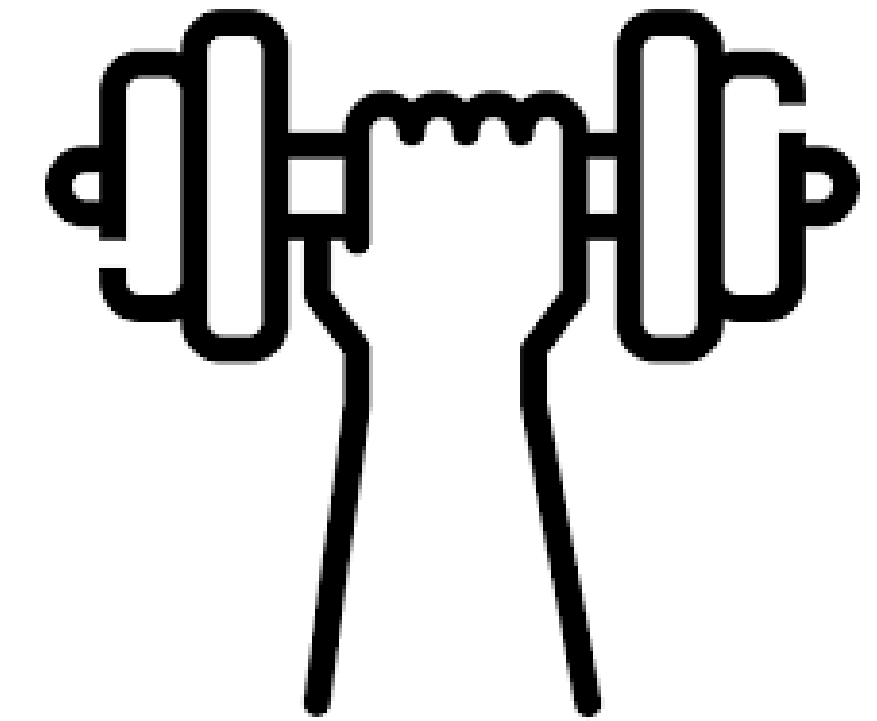
So you want to change something…

- Run a marathon

- Climb a mountain

- Break the world breath-holding record (Kate Winslet)

Domino - for all it's wonderful features, will also run if:

- Servers are configured poorly
- Environment is managed terribly
- It's generally ignored by system admins/owners and IT!!

So you want to change something...

- Upgrade Domino
- Implement new features
- Integrate with other systems or apps
- Deploy major mail routing or security changes
- Execute server consolidation or OS updates

- Technical
  - Preparing for ANY changes
  - Responding to industry/global issues

- Operational
  - Opportunity to solve persistent issues
  - Improve processes
  - Long-term stability

- Business
  - License/technical audits
  - Technology strategy
  - TCO review/update

- we collect over 400 configuration items from EACH server

- we collect environmental information
  (OS, DLL dependencies, external connectivity etc)

- We feed information into a comprehensive db with all parameters
  (You can do this manually with excel or checklist)

- developed a scoring system to give you a "score" out of 100

- benchmark against other customers

General Configuration	90%	comments
Server documents config	85%	There are many parameters in the security tab that need attention
Configuration documents config	96%	DKIM should be enabled for more secure mail transfer
Connection documents config	79%	Several connection douments can be consolidated
Domain documents config	100%	Domain documents configured well
Database health	63%	
Data Footprint	83%	No Quota on any of the mailboxes
ODS	56%	Some DBs with OLD ODS even 41 and 43, which will be better to match ODS with server version
Compression Settings	50%	About 30% of database with data compression and 70% with design compression
Maintenance Programs	63%	You can use the database maintenance (DBMT) tool for performing multiple daily/weekly administrative tasks

⊙ General Configuration

  ⊙ Server documents config

  ⊙ Connection documents config

  ⊙ Configuration documents config

  ⊙ Domain documents config

◉ Database health

- ◉ Data footprint

- ◉ ODS

- ◉ Compression settings

- ◉ Maintenance programs

- Optimisation
  - Network compression
  - Transaction logging
  - DAOS

⊙ Cluster Management

  ⊙ Health

  ⊙ Configuration
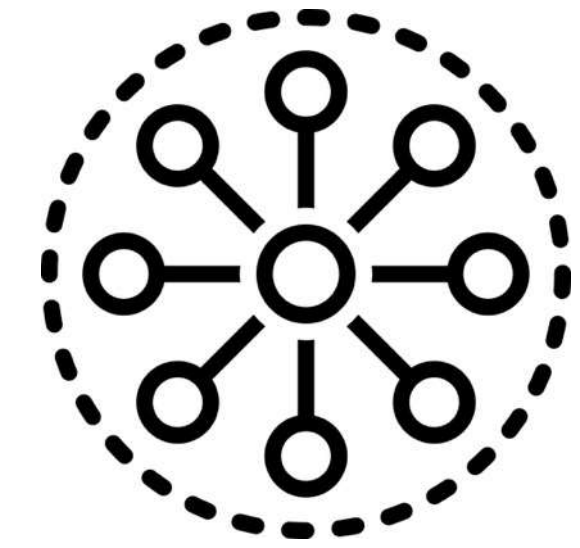
⊙ Replication

⊙ Topology

⊙ Settings
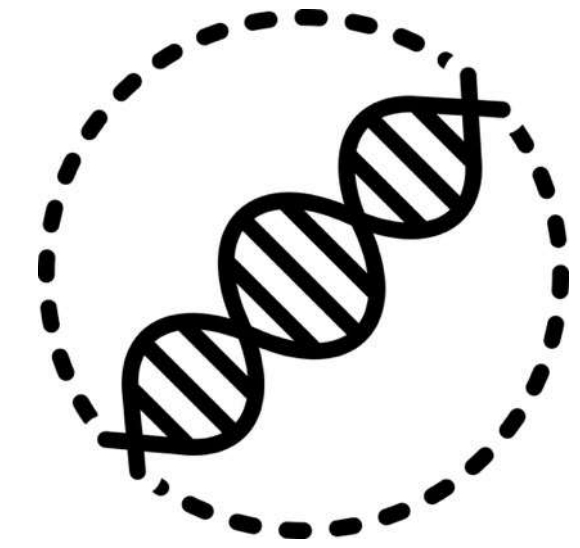
⊙ Directory Management

    ⊙ Domino Directory

    ⊙ Group Management

    ⊙ Directory Assistance

    ⊙ LDAP
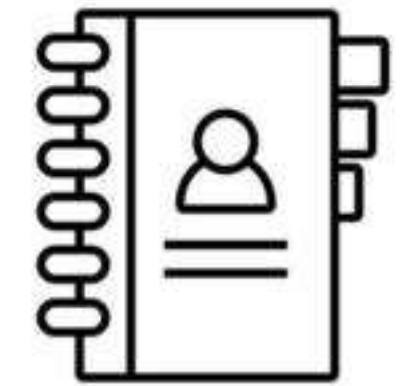
⊙ Agent Management

   ⊙ Server Agent Settings

   ⊙ Agent Security Settings

   ⊙ Agent Timeout Settings

- Monitoring & Event Management
  - DDM, Collection & Events Settings
  - Fault, restart & alerting settings

- Security
  - ID Vault
  - Notes/Web Authorisation
  - ECL
  - Default ACLs

◉ Web Server

   ◉ Web Server Config

   ◉ TLS
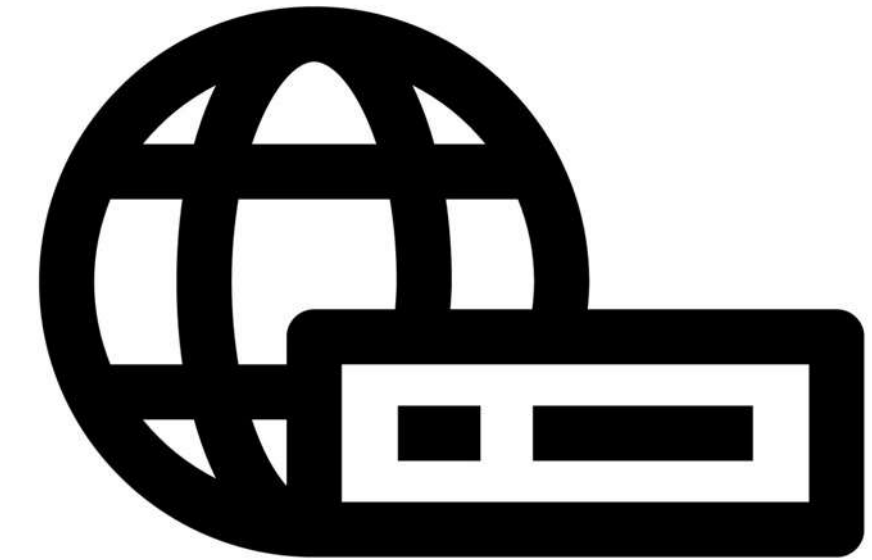
- Policies
  - Organisational
  - Explicit
  - Precedence
  - Settings documents

⊙ Application Management

⊙ Template management

⊙ Updates management

⊙ Application clustering
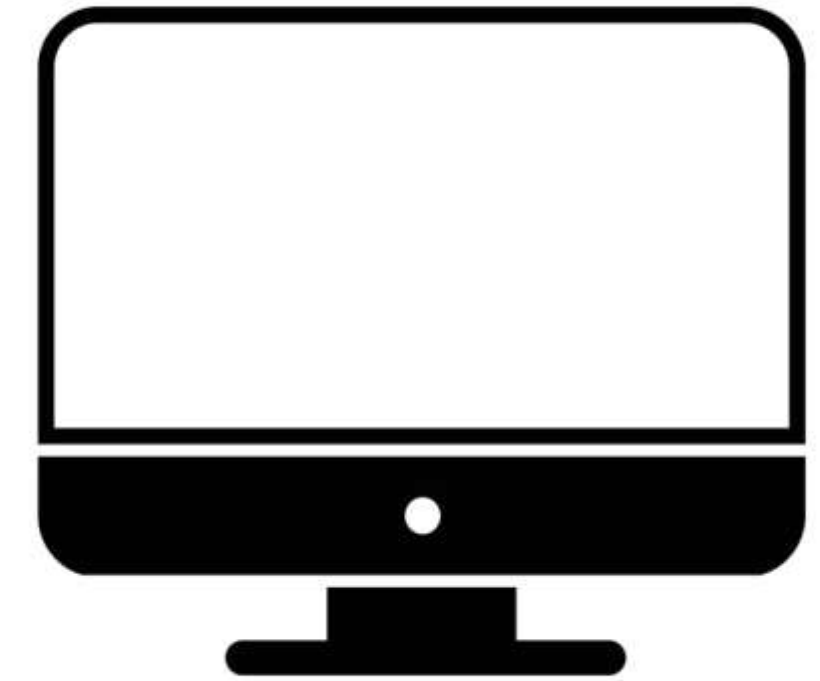
⊙ Backup processes

   ⊙ Database backup processes

   ⊙ Database backup tools
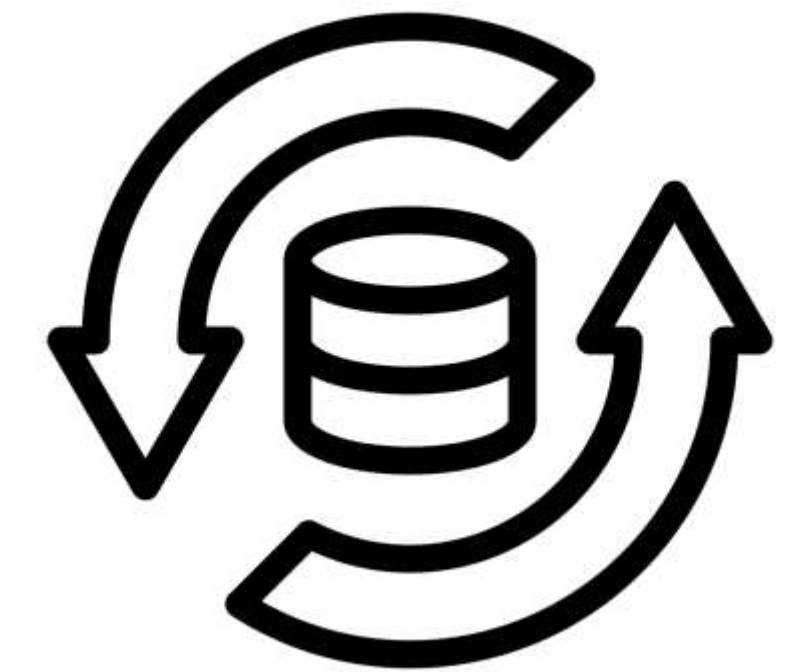
- New Features
  - One-touch setup/automation
  - Active Directory lookup
  - DKIM
  - New backup/restore capabilities
  - Containerised Domino servers

OUTCOMES

ISW

HCL Domino
Health Check

Customer:	ENGAGE
Date:	January 2023
Collection Date:	January 2023
# Domino Servers:	10
# Users:	2105

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Date:	January 2023
Collection Date:	January 2023
# Domino Servers:	10
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TOTAL SCORE	82%	Comments
General Configuration	90%	General configuration is fairly good. Attention for Security section and connection documents
Database health	63%	Database health need some attention for improvements as compression and improve maintenance tasks
Optimisation	61%	Optimisation can be improved in regard to disk space and db performance
Cluster Management	100%	Cluster Management not implemented although it is highly recommended from redundancy perspective and disaster recovery policy.
Replication	77%	Replication is good, although it is configured and working well across al the environment a couple of points to be considered to improve maintenance and to simplify the topology
Directory Management	93%	Directory management is very good with a minor modification needed across ACL and LDAP tasks than can be removed in non-used servers
Agent Management	94%	Agents management is very good with some modification needed in security to maintain it's level to be high
Monitoring & Event Management	83%	Monitoring & Event Management is well configured with some improvement needed in DDM configuration ant to make sure all fault restart enabled across all servers

Priority	Action
Urgent	Routing between domains
	ID file clean-up
	Certify IDs and User Key rollover
	Updates to MarvelClient
Medium	Enable transaction logging
	Enable DAOS
	Connection documents consolidation
	Configure DKIM
	Upgrade On-Disk Structure
	Enable Compression
	Maintain databases using the DBMT tool
	Improve network performance for HCL Notes client
	Notes client upgrade to latest version 12.0.2
	Directory clean-up
	Turn on NIFNSF
	Notes.ini clean-up
	Implement Best Practice notes.ini parameters across all servers
	Full Text Index on separate Drive
	Remove unnecessary Server Tasks
	Internet Site review and clean-up
	Managing TLS certificates with Certificate Manager
	Review and consolidate policies
Low	Cluster Management
	Notes Federated login
	HCL Nomad for Web browser
	Backup and restore
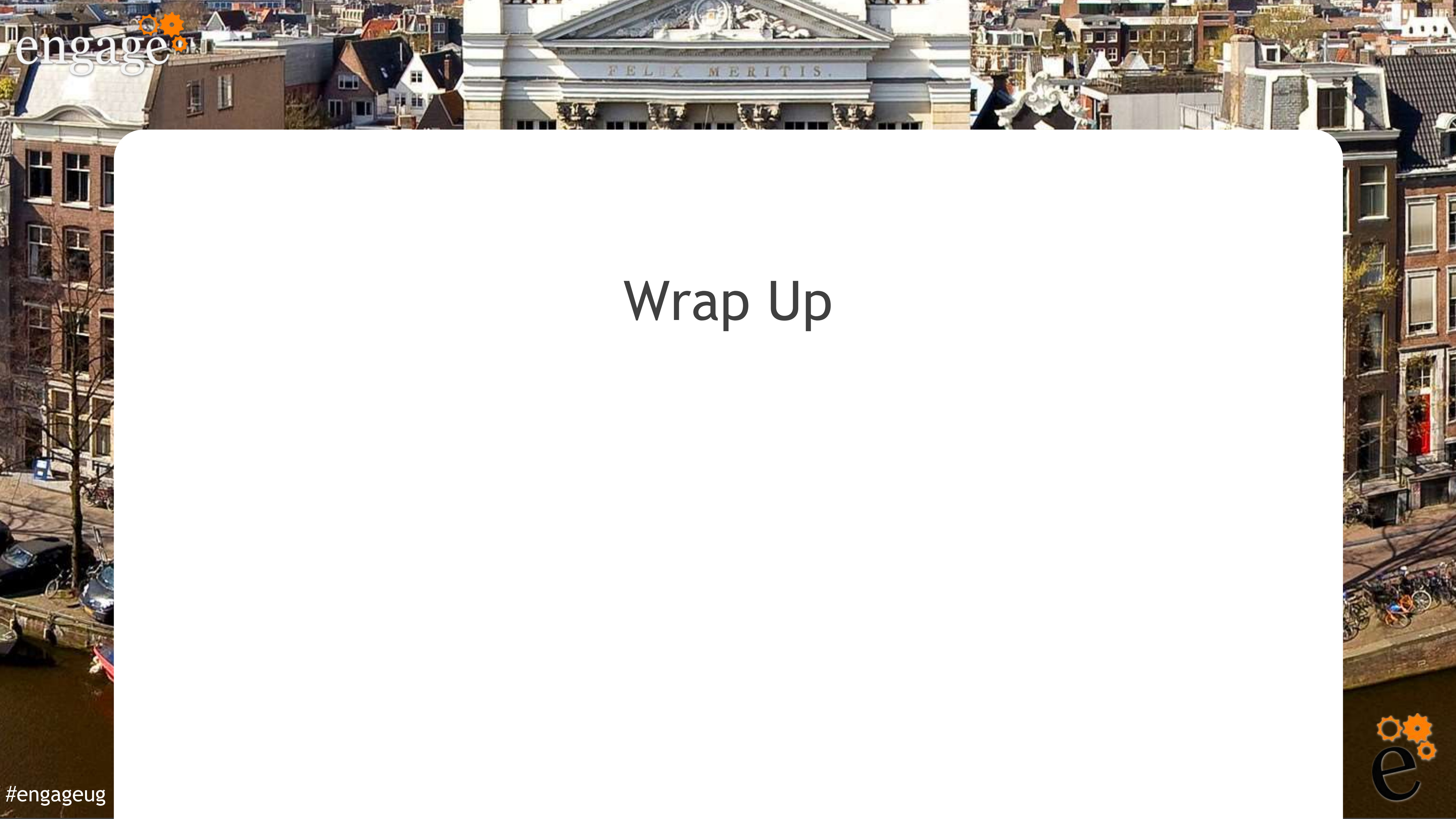
Wrap Up

This is not an exhaustive list... but it's PLENTY to get you started on a health check!

SERVER INFO	Restricted System Administrator	Net address	Java Servlet support
Server	Administer server from a browser	Enabled	Transaction Logging Enabled?
Server Title	Sign or Run unrestricted methods and operations	Web TCP/IP Port Number	Log path:
FQDN	Sign agents to run on behalf of someone else	Web TCP/IP Port Status	Logging style:
Domino Version	Sign agents or XPages to run on behalf of the invoker	Enforce server access setting	DAOS Enabled
Operating System	Sign or Run restricted Lotus script/java agents	Web SSL port number	Minimum size of object before Domino will store in DAOS:
CPU count	Run Simple and formula Agents	Web SSL port Status	DAOS base path:
Server memory	Sign script libraries to run on behalf of someone else	Directory (LDAP) TCP/IP Port Number	Defer object deletion for:
Disk space	Run Restricted java/java script/COM agents	Directory (LDAP) TCP/IP Port Status	DAOS object encryption:
Domino binaries	Run Unrestricted java/java script/COM agents	Enforce server access setting	DAOS encryption strength:
Domino data	Compare Public keys	SSL port number	DAOS Tier 2 Enabled
Domino transaction logs	Allow anonymous Notes connections	SSL port Status	Notes Traveler Enabled
Domino DAOS data	Check passwords on Notes IDs	Mail (SMTP Inbound) TCP/IP Port Status	Maximum Memory Size:
Domino FTI	Internet authentication	Enforce server access setting	IPC Socket Ports:
Domino Views	Access server	Mail (SMTP Outbound) TCP/IP Port Status;	External Server URL:
SERVER DOCUMENTS	Not access server	Enforce server access setting	Access server:
Directory Assistance	Create databases & templates	Admin Process	Not access server:
Load Internet configurations from Server\Internet Sites documents:	Create new replicas	Maximum number of threads:	Remote user commands:
Run NSD To Collect Diagnostic Information	Create master templates	Day Max concurrent agents:	User managed security:
Automatically Restart Server After Fault/Crash	Allowed to use monitors	Day Max LotusScript/Java execution time:	CONFIG DOCUMENTS
Cleanup Script / NSD Maximum Execution Time:	Not allowed to use monitors	Night Max concurrent agents:	Type Ahead
Server Shutdown Timeout:	Trusted servers	Night Max LotusScript/Java execution time:	License Tracking
Maximum Fault Limits:	Passthru Use	Domain Catalog Enabled?	Enforce Internet Password Lockout
Mail Fault Notification to:	Access this server	Directory Cataloger Enabled?	Smart Upgrade Database Link
Administrators	Route through	Directory Cataloger Schedule	Limit Concurrent Smart Upgrade
Full Access Administration	Cause calling	Internet Cluster Manager Configured?	Provisioning settings are enabled
Administrators	Destinations allowed	AD Password Sync Configured?	Basics
Database Administrators	Notes network Ports	Host Name	Number of mailboxes
Full Remote Console Administrators	Port	Domino Web Engine	Address lookup
View only administrators	Protocol	Session authentication	Exhaustive lookup
System Administrators	Notes network	Web SSO Configuration	Relay host for messages leaving the local internet domain

Maximum message size

Send all messages as low priority if the message size is between

Allow messages to be sent only to the following external internet domains

Deny messages to be sent to the following external internet domains (* means all)

Allow messages only from the following internet hosts to be sent to external internet domains

Deny messages from the following internet hosts to be sent to external internet domains (* means all)

Perform Anti-Relay enforcement for these connecting hosts

Exclude these connecting hosts from anti-relay checks

Exceptions for authenticated users

DNS Blacklist filters

DNS Blacklist sites

Desired action when a connecting host is found in a DNS Blacklist

Custom SMTP error response for rejected messages

Verify connecting hostname in DNS

Verify that local domain recipients exist in the Domino Directory

Deny mails to groups

Deny messages intended for the following internet addresses

Allow messages only from the following Internet addresses to be sent to the Internet

Deny messages from the following Internet addresses to be sent to the Internet

Allow messages only from the following Notes addresses to be sent to the Internet

Deny messages from the following Notes addresses to be sent to the Internet

Maximum delivery threads

Encrypt all delivered mail

Pre-delivery agents

Pre-Delivery agent timeout

User rules mail forwarding

Reverse Path for forwarded mail

Over warning threshold notifications

Over quota notification

Error interval

Over quota enforcement

Server Rules

Message disclaimers

Message tracking

Message tracking collection interval

Log message subjects

Allowed to track messages

Allowed to track subjects

Message Recall

Allow recall of messages with unread status

Do not allow recall of messages older than

Journaling

Out-of-Office

Restrict name lookups to primary directory only

NOTES.INI Settings

HCL iNotes Tab Configured?

Activity Logging is enabled (y/n)

Enabled logging types

Checkpoint interval

Log checkpoint at midnight

Log checkpoints for prime shift

Prime shift interval

Activity Trends

Enable activity trends collector

Activity trends collector database path

Time of day to run activity trends collector

Days of the week to collect observations

Activity Trends Data Profile Options

Mail-in Database for diagnostic reports

Maximum size of diagnostic message including attachments (in MB)

Maximum size of NSD output to attach (in MB)

Maximum amount of console output file to attach (in KB)

Diagnostic file patterns

Remove diagnostic files after a specified number of days

Number of days to keep diagnostic files

Fault Analyzer

Run FaultAnalyzer on Fault DBs on this server

Run Fault Analyzer on

Remove attachments from duplicate faults

Sync Active Directory passwords to Domino

Password change requests expire after

Managers of password sync request databases:

CONNECTION DOCUMENTS

DOMAIN DOCUMENTS

DATA FOOTPRINT

Total # databases

Total Domino Data size (on disk) GB

Total # Mail Files

Total Mail File size (on disk) GB

Mail Files with Quota

Mail Files without Quota

ODS

COMPRESSION SETTINGS

databases with Data Compression

databases with Design Compression

MAINTENANCE PROGRAMS

NETWORK COMPRESSION

network compression enabled (y/n)

CLUSTER HEALTH

# of cluster replica tasks

work queue depth value

CLUSTER CONFIG

REPLICATION TOPOLOGY

Replication of core DBs (names.nsf, admin4, events4 etc.) configured to best practice?

Too many or unnessesary Connection documents

REPLICATION SETTINGS

DOMINO DIRECTORY

DD Config Profile

Domino domain defined by this Domino Direcotry

Auto-populated group members update interval

Use more secure internet passwords

List of Admins allowe to create cross domain config docs

DD ACL

GROUPS

# of total groups

# of security groups

# of mail groups

# of multi-purpose groups

# of termination groups

localdomainservers in use (y/n)

localdomainadmins in use (y/n)

otherdomainservers in use (y/n)

DIRECTORY ASSISTANCE

directory assistance enabled (y/n)

directory assistance documents

LDAP

servers LDAP enabled

LDAP CONFIG

Anonymous Users Can query	Enforce Password Expiration	# Explicit Policies assigned using Policy Assignment	At least 1 Upgrade config created
Allow write access	Required Change Interval	PRECEDENCE	Messaging & Notifications Configured
Timeout	Required Password Quality	Policy Precedence configured correctly for explicit	TEMPLATES MANAGEMENT
Max entries returned	Mandated encryption standard:	SETTINGS	Dedicated server/domain to host templates (y/n)
DN required on bind	Minimum allowable key strength:	# Setup Settings Documents	Master template versioning tracked (y/n)
MONITORING & EVENT MANAGEMENT	Maximum allowable key strength:	# Archiving Settings Documents	# mail templates used
DDM / Monitoring Configuration enabled (y/n)	Preferred key strength:	# Desktop Settings Documents	use customised mail templates? (y/n)
Server Collection Hierarchy configured (y/n)	ID Vault configured in settings Document (y/n)	# Security Settings Documents	
Administration / Auto-Close Probes Enabled (y/n)	Assigned vault:	# Mail Settings Documents	
Fault, restart & alerting settings	Forgotten password help text (y/n)	# Connections Settings Documents	
ID VAULT	Enforce password change after password has been reset:	# IBM Traveler Settings Documents	
ID Vault DB created (y/n)	Allow Notes-based programs to use the Notes ID Vault:	# Roaming Settings Documents	
ID Vault Trust Certificated created and current (y/n)	Whitelist rules configured for proxies (y/n)	# Symphony Settings Documents	
ID Vault administrators defined (y/n)	ECL	MARVELCLIENT HEALTH	
ID password reset roles defined (y/n)	Admin ECL configured (y/n)	Analyze & Config DB up to date latest version (y/n)	
NOTES/WEB AUTHORISATION	Admin ECL contains correct server groups/wildcards	Replication healthy (y/n)	
ID Public Key Specification	Admin ECL contains correct user groups/wildcards	DB Size healthy	
Password Key width	Admin ECL does not contain other/external signers	Cleanup Task enabled	
Certificate expiration date	DEFAULT ACLS Mail Files	mc.dll DEPLOYMENT	
Custom Password Policy Enabled	DEFAULT ACLS Domino Directory	mc.dll deployed to all Notes users	
Notes Shared Login Enabled	TLS	latest DLLs (including 64-bit) deployed into config DB	
Federated Login Enabled	CertMgr task enabled (y/n)	Installation document correctly configured	
Name variations for web authorisation	CertStore DB created (y/n)	AUDIT ACTIONS	
SECURITY SETTINGS	TLS configured for all web sites (y/n)	default audit actions enabled	
Default Security Settings Document Created (y/n)	Strong Ciphers used (y/n)	Client data correctly uploaded to Analyze DB	
Security Settings Document assigned to Policy (y/n)	ORGANISATIONAL	Audit agent configured	
Use Custom Password Policy for Notes Clients	Organisational Policy created & deployed (y/n)	MANAGEMENT ACTIONS	
Check password on Notes ID file	Default Security Settings Assigned to Org Policy (y/n)	Config actions running without error	
Allow Users to Change Internet Password over HTTP	Settings Assigned to Org Policy (y/n)	MCUPGRADE	
Update Internet Password When Notes Password Changes	EXPLICIT	Latest MCUpgrade deployed	
Don't prompt for a password from other programs	# Explicit Policies created & deployed	Latest Notes clients & Fix Packs Indexed	