

VM:

The server (*DB Host*) on which SQL Server (*the DBMS*) is installed.

ACTION: Collaborate with Systems Group to conform DB Hosts to MVP standard:

MEMORY

>= 64GB RAM

CPU

Deferred to Systems group / VMWare administrators

STORAGE:

D: (*Installs*) >= 100GB

E: (*Data (*.mdf)*) >= 150GB

F: (*Log (*.ldf)*) >= 50GB

S: (*FileSharing – incl. backups (*.bkp, *.dmp, *.bak, etc)*) >= 50GB

T: (*tempdb files*) >= 150GB

DISK (I/O)

NTFS AU size = 64KB unit/block size

**Guidance current through AzureSQL*

Partition Alignment Offset = 1024KB

LOCAL ADMINISTRATOR: SIERRASPACE\R-SPCDBA

INSTANCE

Instance:

The DBMS (*Database Management System*) that hosts the databases that store data of varying types.

No strict dependency on other groups within IT.

ACTION: Conform instances to MVP standard

DBMS VERSION: N-2

SERVICES:

- SSIS – ON (**Automatic Start**)
- SSAS – OFF
- SSRS – OFF
- FULL TEXT SEARCH – ON (**Automatic Start**)
- SQL BROWSER – ON (**Manual Start**)

MAXIMUM INSTANCES PER HOST: 4 (*Default + 3*)

FEATURES:

System stored procedure / extended stored procedure (xp) enablement determined by functional group membership

TDE – Not currently necessary. Defer to file level encryption / encryption-at-rest to Cyber and Systems groups

AOAGs – Built / Implemented as necessary per *production* solution
Not enabled by default
Not in use for lower SDLC environments

model database:

- Simple Recovery
- File Growth (data / log): 5%
- Max Size:
 - Data – 150GB
 - Log – 50GB

SQL Server Security Facets

Wholly self-contained, separate environment from Active Directory / Cyber Security management tools. Encompasses ~8 discrete layers, with various inheritance levels.

DOMAIN ACTION:

Collaborate with Cyber to create solution groups in AD.
Solution owner dictates group membership.

Collaborate with Cyber to create instance sysadmin group in AD. DBA group dictates provisional membership as necessary.

SERVER ACTION:

Ensure BUILTIN accounts (*Users, Local Admins, etc.*) are not granted default elevated access to SQL Server.

INSTANCE ACTION:

Apply **SIERRASPACE\P-AIISQL-DBMS-sysadmin** from AD
Assign to sysadmin role
Apply instance sysadmin group from AD
Assign to sysadmin role
Enable **sa** (SQL Authentication)
Assign to sysadmin role
Create **provisional_sa** (SQL Authenticated)
Assign to sysadmin role
**Process controlled temporary access*
Apply default solution groups from AD

DATABASE ACTION:

Map AD solution groups to corresponding databases
Apply corresponding roles

SCHEMA ACTION:

Map AD solution groups to corresponding databases
Map database users to corresponding schemas
Apply corresponding permissions

OBJECT ACTION: TBD**ROW ACTION:** TBD**COLUMN ACTION:** TBD

High Availability / Disaster Recovery

These concepts are dictated by the RPO (Recovery Point Objective) and RTO (Recovery Time Objective) of a given solution, as specified by solution owners.

ACTION: Collaborate with Solution Owners to conform databases to MVP standard per solution

SDLC – Development: Nightly Full Database Backups

SDLC – UAT (Test): Nightly Full Database Backups

SDLC – Production: Nightly Full Database Backups + 15 Minute Transaction Log Backups

MONITORING

The subject areas that encompass “*SQL Server*” or “*a database*” vary widely and are not typically within the purview of other groups within IT.

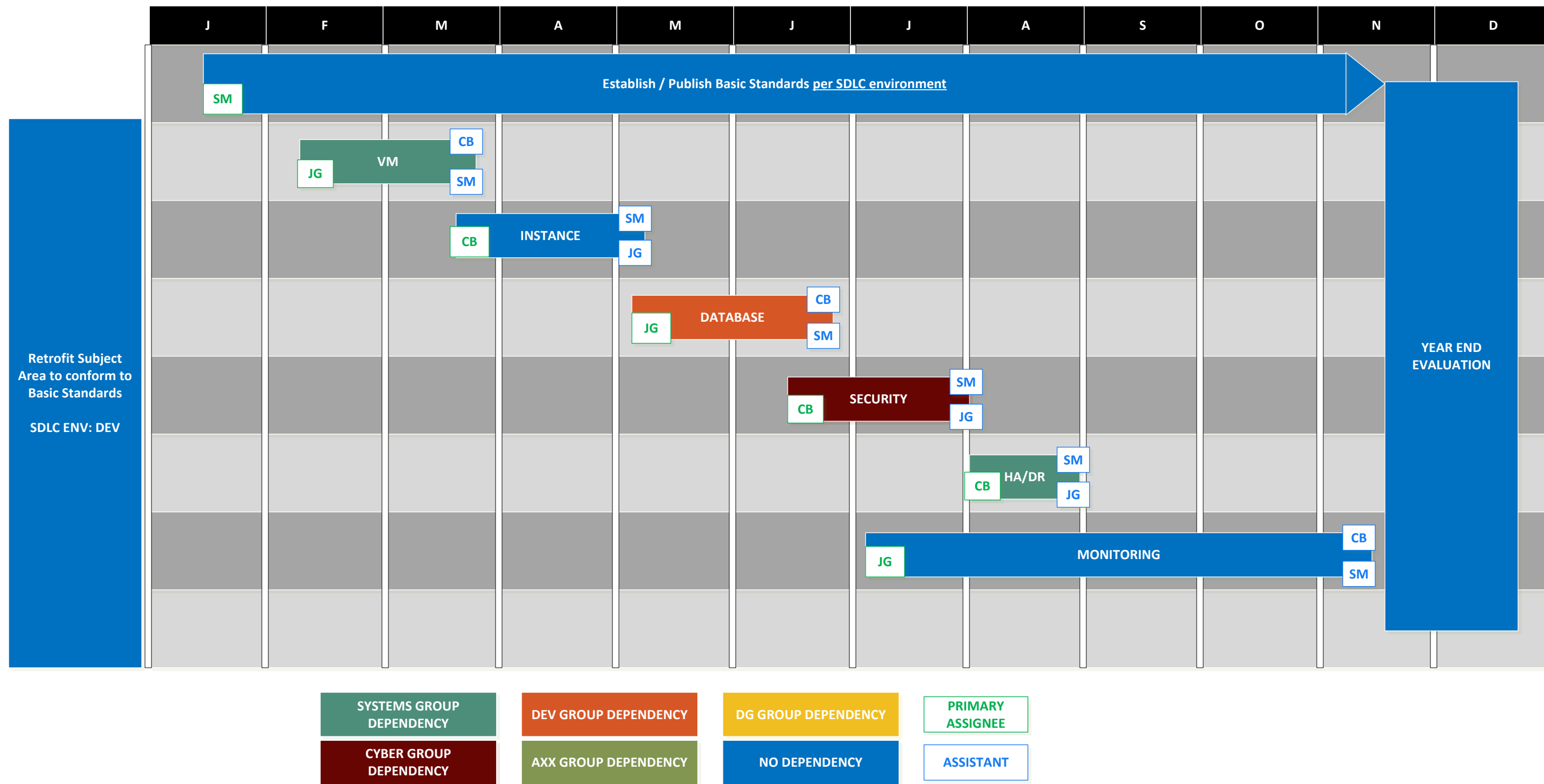
ACTION: Using a combination of native techniques and solutions, along with Idera Diagnostic Manager, develop and configure alerts and monitoring thresholds for the artifacts within the database environment, per SDLC environment, and solution requirements.

Typical events / occurrences monitored:

- Service Status
- Network Latency
- Resource Consumption
- Disk Space
- Deadlocking
- Session Blocking
- Index Tuning Lifecycle

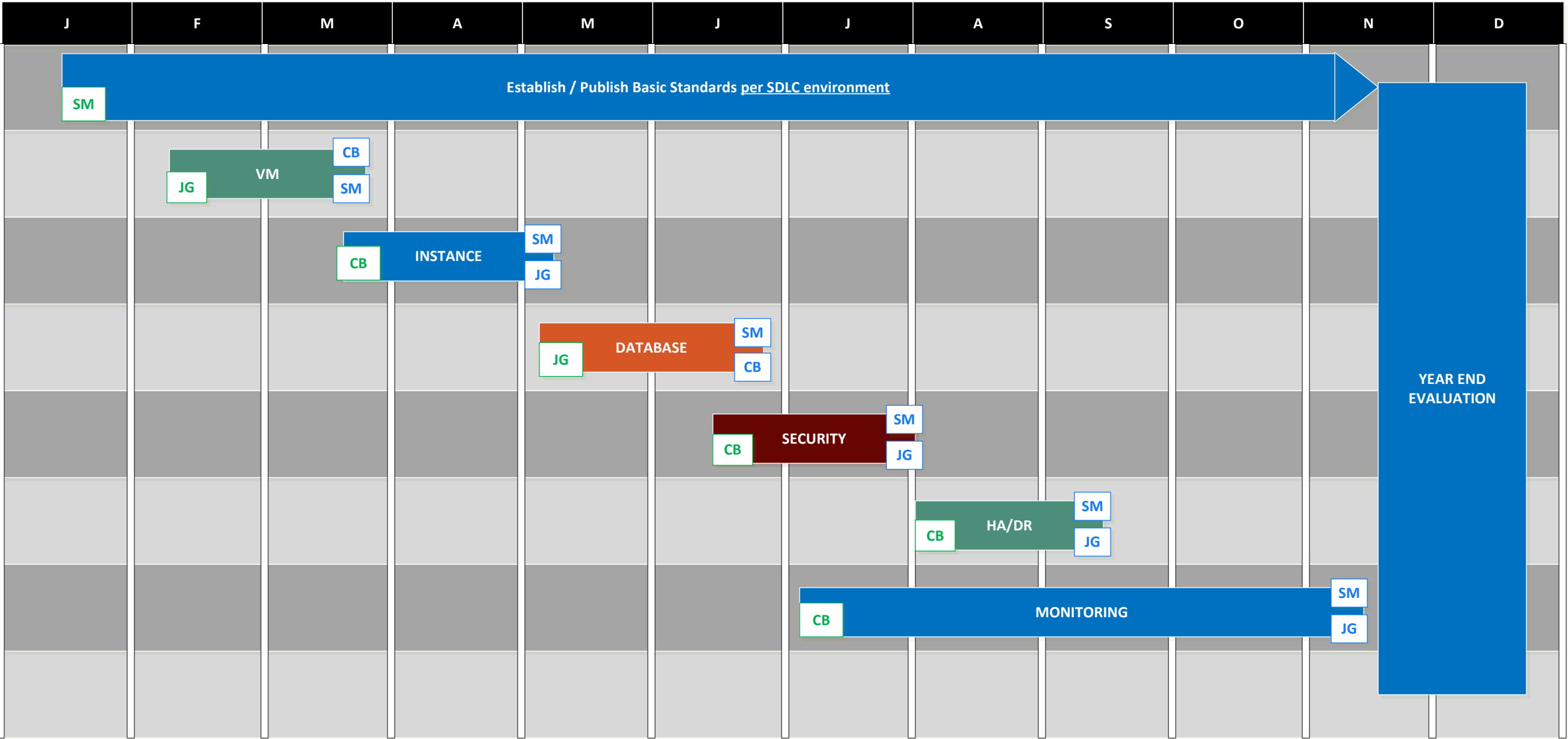
Notifications: r-dba-team@sierraspace.com

Response: Dependent upon SDLC environment, solution criticality, event specifics.



Retrofit Subject Area to conform to Basic Standards

SDLC ENV: UAT (TEST)



SYSTEMS GROUP
DEPENDENCY

CYBER GROUP
DEPENDENCY

DEV GROUP DEPENDENCY

AXX GROUP DEPENDENCY

DG GROUP DEPENDENCY

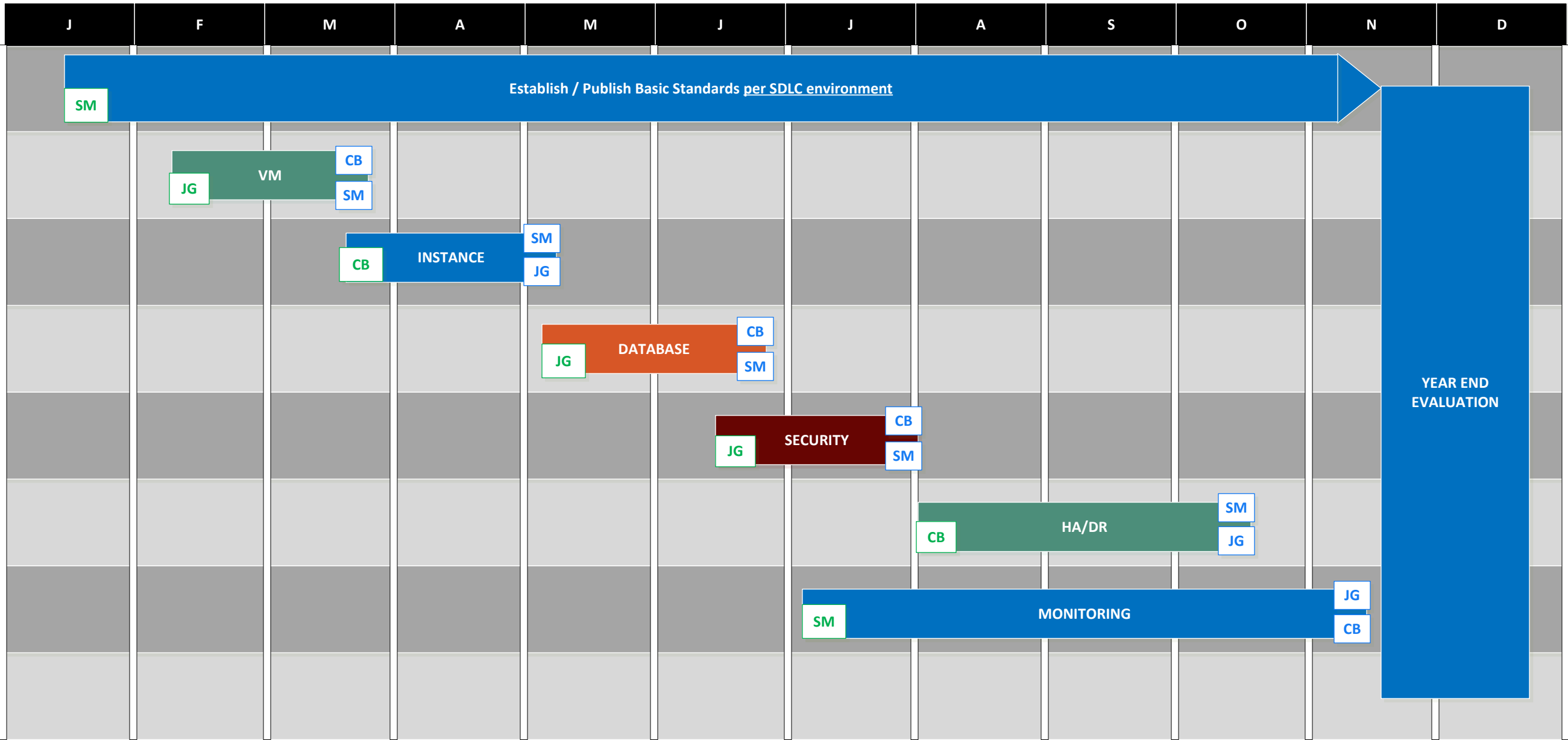
NO DEPENDENCY

PRIMARY
ASSIGNEE

ASSISTANT

Retrofit Subject
Area to conform to
Basic Standards

SDLC ENV: PROD



SYSTEMS GROUP
DEPENDENCY

CYBER GROUP
DEPENDENCY

DEV GROUP DEPENDENCY

AXX GROUP DEPENDENCY

DG GROUP DEPENDENCY

NO DEPENDENCY

PRIMARY
ASSIGNEE

ASSISTANT