Update Role

Overview

This API allows a user with the permission ("Update role") to update an existing role. This will:

1. Find the role based on the RoleCode provided in the request body.
2. Update the basic information of the role (Name, Description).
3. Important: Remove all current Privileges of that role.
4. Re-add the list of new permissions provided in the request.

This API essentially replaces the entire list of permissions of a role.

API Specification

API	URL
POST	/api/role/update
Permission	[AuthorizeByPrivilege("Update role")]

Request sample

```
{
  "roleName": "Kỹ thuật viên Lab (Updated)",
  "roleCode": "LAB_USER",
  "roleDescription": "Vai trò đã được cập nhật mô tả.",
```

```
    "privileges": [
      {
        "privilegeId": 1,
        "privilegeName": "View Patient",
        "description": "..."
      },
      {
        "privilegeId": 6,
        "privilegeName": "Export Report",
        "description": "..."
      }
    ]
  }
```

Field	Description	Data Type	Examples
roleName	The new display name of the role.	string	"Kỹ thuật viên Lab (Updated)"
roleCode	The identifier of the role to be updated. (Cannot be changed)	string	LAB_USER
roleDescription	New detailed description of the role.	string	Vai trò đã được...
privileges	The new list of permissions will completely replace the old list.	List<PrivilegeDto>	[{ "privilegeId": 1 }, ...]

Response sample

```
{
  "statusCode": 200,
  "message": "Role has been updated successfully.",
  "data": {
    "roleName": "Kỹ thuật viên Lab (Updated)",
    "roleCode": "LAB_USER",
    "roleDescription": "Vai trò đã được cập nhật mô tả.",
    "privileges": [
```

```
    {
      "privilegeId": 1,
      "privilegeName": "View Patient",
      "description": "..."
    },
    {
      "privilegeId": 6,
      "privilegeName": "Export Report",
      "description": "..."
    }
   ]
  },
  "responsedAt": "2025-10-30T08:15:00.123Z"
}
```

Validation

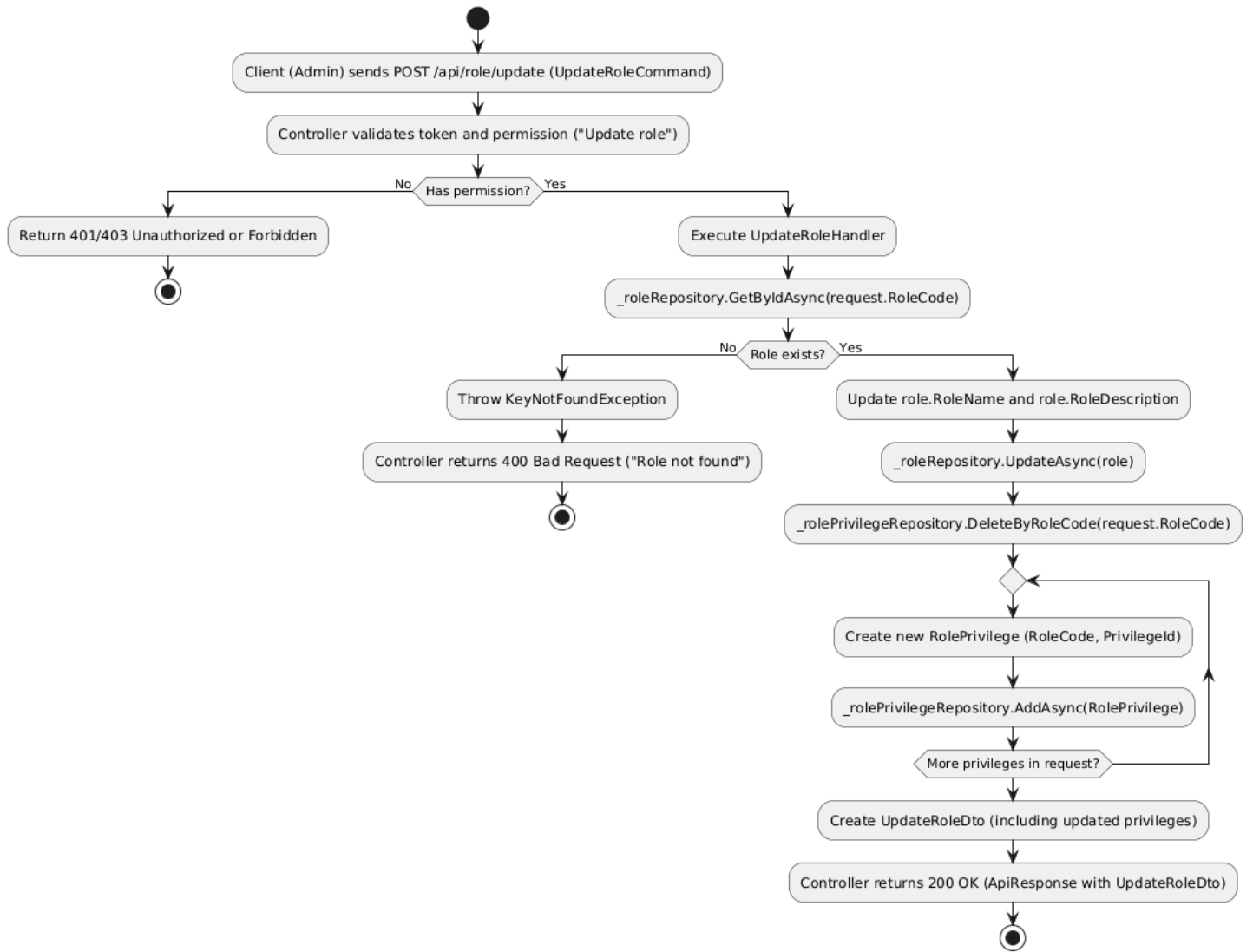| Status code	Description	Examples
400	Error: RoleCode not found in database.	{ "statusCode": 400, "message": "Role with ID LAB_TECH not found.", ...}

401	Unauthorized. User is not logged in.	Error: response status is 401

403	Forbidden. User is logged in but does not have "Update role" permission	Error: response status is 403

Activity Diagram

⬛ Activity Diagram - Update Role Flow

```
                                  ●
                                  │
            ┌─────────────────────┴─────────────────────┐
            │ Client (Admin) sends POST /api/role/update │
            │ (UpdateRoleCommand)                        │
            └─────────────────────┬─────────────────────┘
            ┌─────────────────────┴─────────────────────┐
            │ Controller validates token and permission  │
            │ ("Update role")                            │
            └─────────────────────┬─────────────────────┘
                         No  ╱ Has permission? ╲  Yes
            ┌───────────────┘                  └───────────────┐
┌───────────────────────────────┐              ┌───────────────────────────┐
│ Return 401/403 Unauthorized    │              │ Execute UpdateRoleHandler │
│ or Forbidden                   │              └─────────────┬─────────────┘
└───────────────┬───────────────┘              ┌─────────────┴─────────────────────┐
                ●                               │ _roleRepository.GetByIdAsync       │
                                                │ (request.RoleCode)                 │
                                                └─────────────┬─────────────────────┘
                                             No  ╱ Role exists? ╲  Yes
                               ┌──────────────────┘             └──────────────────┐
                  ┌────────────────────────────┐            ┌──────────────────────────────────┐
                  │ Throw KeyNotFoundException  │            │ Update role.RoleName and          │
                  └─────────────┬──────────────┘            │ role.RoleDescription              │
                  ┌─────────────┴──────────────┐            └─────────────┬────────────────────┘
                  │ Controller returns 400 Bad  │            ┌─────────────┴────────────────────┐
                  │ Request ("Role not found")  │            │ _roleRepository.UpdateAsync(role) │
                  └─────────────┬──────────────┘            └─────────────┬────────────────────┘
                                ●                            ┌─────────────┴────────────────────────────┐
                                                             │ _rolePrivilegeRepository.DeleteByRoleCode │
                                                             │ (request.RoleCode)                        │
                                                             └─────────────┬────────────────────────────┘
                                                                        ◇◄─────────────────┐
                                                             ┌─────────────┴────────────┐   │
                                                             │ Create new RolePrivilege  │   │
                                                             │ (RoleCode, PrivilegeId)   │   │
                                                             └─────────────┬────────────┘   │
                                                             ┌─────────────┴────────────────┐│
                                                             │ _rolePrivilegeRepository.     ││
                                                             │ AddAsync(RolePrivilege)       ││
                                                             └─────────────┬────────────────┘│
                                                            ╱ More privileges in request? ╲──┘
                                                             └────────────┬─────────────┘
                                                             ┌─────────────┴────────────────────┐
                                                             │ Create UpdateRoleDto (including    │
                                                             │ updated privileges)                │
                                                             └─────────────┬────────────────────┘
                                                             ┌─────────────┴────────────────────────┐
                                                             │ Controller returns 200 OK (ApiResponse │
                                                             │ with UpdateRoleDto)                    │
                                                             └─────────────┬────────────────────────┘
                                                                           ●
```

Sequence Diagram

```mermaid
sequenceDiagram
    Client->>RoleController: POST /api/role/update (UpdateRoleCommand)
    Note over RoleController: [AuthorizeByPrivilege("Update role")]
    RoleController->>IMediator: Send(command)
    IMediator->>UpdateRoleHandler: Handle(command)
    UpdateRoleHandler->>IRoleRepository: GetByIdAsync(command.RoleCode)
    IRoleRepository->>Database: SELECT * FROM Roles WHERE RoleCode = ...
    Database-->>IRoleRepository: RoleEntity
    IRoleRepository-->>UpdateRoleHandler: role

    alt Role Not Found
        UpdateRoleHandler-->>IMediator: Throws KeyNotFoundException
        IMediator-->>RoleController: Throws KeyNotFoundException
        RoleController->>RoleController: catch (KeyNotFoundException)
        RoleController-->>Client: 400 Bad Request ("Role with ID... not found.")
    end

    UpdateRoleHandler->>IRoleRepository: UpdateAsync(role) (update Name, Description)
    IRoleRepository->>Database: UPDATE Roles SET ... WHERE RoleCode = ...
    Database-->>IRoleRepository: Success
    UpdateRoleHandler->>IRolePrivilegeRepository: DeleteByRoleCode(roleCode)
    IRolePrivilegeRepository->>Database: DELETE FROM RolePrivileges WHERE RoleCode = ...
    Database-->>IRolePrivilegeRepository: Success

    Note over UpdateRoleHandler: Loop through command.Privileges
    UpdateRoleHandler->>IRolePrivilegeRepository: AddAsync(new RolePrivilege)
    IRolePrivilegeRepository->>Database: INSERT INTO RolePrivileges...
    Database-->>IRolePrivilegeRepository: Success
    Note over UpdateRoleHandler: (Loop continues for all new privileges...)

    UpdateRoleHandler-->>IMediator: UpdateRoleDto
    IMediator-->>RoleController: UpdateRoleDto
    RoleController->>RoleController: new ApiResponse<UpdateRoleDto>(200, "Success")
    RoleController-->>Client: 200 OK (ApiResponse)
```