

# Apache 2.4 vs. 2.2



# SWITCH

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# Changes and new features in Apache 2.4

- Apache 2.4 introduces harmonization of authentication and authorization mechanisms.
- `Require` directives now allow to specify the order of authorization rules.
  - Multiple authorization methods are called in the same order in which the `Require` directives appear in the configuration.
- New authorization container directives:
  - `<RequireAll>`, `<RequireAny>`, `<RequireNone>`
    - This enables you to specify complex authorization rules, similar to the Shibboleth XML access rules.
  - Default for `Require` directives corresponds to `<RequireAny>`, if no container is explicitly used.

# Changes and new features in Apache 2.4

- Host and IP based authorization is now handled by `Require` directives.
  - `Order`, `Allow`, `Deny`, `Satisfy` are deprecated, but still supported.

# Changes in Shibboleth SP affecting Apache

- For Apache 2.4 and SP 2.5.2 or later, the syntax of the Apache configuration statements regarding access control and Shibboleth has slightly changed.
- The Shibboleth SP module introduces new and updated statements that reflect the changes in Apache 2.4.

# Changes in Shibboleth SP affecting Apache

- Use new syntax of Shibboleth directives even in Apache 2.2:
  - Requires that directive `ShibCompatWith24 On` is used

– Old syntax:

```
Require homeOrganizationType university uas
```

– New syntax:

```
ShibCompatWith24 On  
Require shib-attr homeOrganizationType university uas
```

# Changes in Shibboleth SP affecting Apache

- Enforce that ALL `Require` directives must be satisfied (default is that ANY `Require` statement must be satisfied):

## – Apache 2.2:

```
ShibRequireAll On  
Require ...  
Require ...
```

## – Apache 2.4:

```
<RequireALL>  
  Require ...  
  Require ...  
</RequireALL>
```

# Pitfalls

- `<RequireAll>` and `<RequireAny>` can't be used at all in Apache 2.2 (only in Apache 2.4)
  - Directive `ShibCompatWith24 On` doesn't help.
- Before doing an upgrade from 2.2 to 2.4, you should update your Apache configuration accordingly to avoid deprecated directives.
  - Else, the migration might fail.

# Further Information

- SWITCHaai Website
  - Shibboleth Service Provider Access Control  
*Considers the differences between Apache 2.2 and 2.4*  
<https://www.switch.ch/aai/support/serviceproviders/sp-access-rules.html>
- Shibboleth Wiki
  - Apache Configuration  
*Considers the differences between Apache 2.2 and 2.4*  
<https://wiki.shibboleth.net/confluence/display/SHIB2/NativeSPApacheConfig>
- Apache Project
  - General instructions to upgrade to 2.4 from 2.2  
<http://httpd.apache.org/docs/2.4/upgrading.html>
  - Authentication and Authorization, section "Beyond just authorization"  
<http://httpd.apache.org/docs/2.4/howto/auth.html>