

`UDependentEffectComponents` add common, cross-class functionality to other effects. Any `UDependentEffectComponent`:

- has an `Owner` that it's dependent upon.
- is automatically added just after its `Owner` is added.
- is automatically destroyed just before its `Owner` is destroyed. This also happens if the dependent is unregistered.
- follows its `Owner`'s `Silence` and `Unsilence`.
- returns its `Owner`'s `Priority`, `Stacks`, `MaxStats`, `Priority`, and `ShouldApplyEffect`.
- is not visible to UI.

0.0.1 Concrete Example

For example, both `UBerserkerGene` (a `UMutation`) and `UFullBloom` (a `UPositiveAura`) modify stats. Despite being different inheritance hierarchically, they do pretty similar things. They utilize `UPermStatMod`. For this example,

- The `UEffectComponent` is `UBerserkerGene`
↳ +15%PhA | -10% PhD | -10%SpD
- The `UDependentEffectComponent` is `UPermStatMod`

To attach `UPermStatMod` to `UBerserkerGene`, add the following to `UBerserkerGene::OnComponentCreated`:

```
void UBerserkerGene::OnComponentCreated()
{
    Super::OnComponentCreated();
    ADD_COMPONENT(UPermStatMod, PermStatMod, GetOwner())
    PermStatMod->StatMods += {
        {EStatEnum::PhysicalAttack, .Modification: 15, EModificationMode::AddPercentage, EStatValueType::Permanent},
        {EStatEnum::PhysicalDefense, .Modification: -10, EModificationMode::AddPercentage, EStatValueType::Permanent},
        {EStatEnum::SpecialDefense, .Modification: -10, EModificationMode::AddPercentage, EStatValueType::Permanent},
    };
    PermStatMod->SetOwner(this); // Also applies it
}
```

You can also initialize things on the **UPermStatMod** side of things. For example, if you wanted to make sure there were stats attached to the new owner:

```
void UPermStatMod::SetOwner(UEffectComponent* NewOwner)
{
    // Careful! Squirrels everywhere...
    if (NewOwner != nullptr)
    {
        // Get StatsComponent
        SEARCH_FOR_COMPONENT_OR_DESTROY(UCombatStatsComponent, StatsComponent, NewOwner->GetOwner(), true)

        // No stats component?
        if (StatsComponent == nullptr)
        {
            UE_LOG(LogTemp, Warning, TEXT("No UCombatStatsComponent found for PermStatMod!"
                "This is required *before* the Owner is set.))
            return;
        }
    }
}
```

0.0.2 List of UDependentEffectComponents

Table 1: All UDependentComponents currently implemented and tested.

Dependent	Short Description	Implemented via	Priority	Note
PermStatMod	Modifies EStatEnums according to its TArray of FStatMods.	AfterRecalculateStats	Dependent	See, e.g., UBerserkerGene.