

## Chapter 30

# Route Flap Damping

### dampen-flap

#### Name

**dampen-flap** - sets options for weighted route damping

#### Syntax

```
dampen-flap {  
  [ suppress-above flap-metric ; ]  
  [ reuse-below flap-metric ; ]  
  [ max-flap flap-metric ; ]  
  [ reach-decay time ; ]  
  [ unreach-decay time ; ]  
  [ keep-history time ; ]  
};
```

#### Parameters

**suppress-above** - value of a route's instability, above which the route is suppressed

**reuse-below** - value of a route's instability, below which a suppressed route is reused

**max-flap** - the maximum value of a route's instability history

**reach-decay** - the time (in seconds) after which a reachable route's instability history decays to half its current value

**unreach-decay** - the time (in seconds) after which an unreachable route's instability history decays to half its current value

**keep-history** - the time (in seconds) for which any history of a route's instability is maintained

#### Description

Weighted route damping treats routes that are being announced and withdrawn (flapping) at a rapid rate as unreachable. If a route flaps at a low rate, it should not be suppressed at all, or suppressed for only a brief period of time. With weighted route damping, the suppression of a route or routes occurs in a manner that adapts to the frequency and duration that a particular route appears to be flapping. The more a route flaps during a period of time, the longer it will be suppressed. The adaptive characteristics of weighted route damping are controlled by a few configurable parameters.

## Defaults

```
dampen flap {  
    suppress-above 3.0 ;  
    reuse-below 2.0 ;  
    max-flap 16.0 ;  
    reach-decay 300;  
    unreach-decay 900;  
    keep-history 1600;  
};
```

## Context

global statement

## Examples

```
dampen flap {  
    suppress-above 4.0 ;  
    reuse-below 3.0 ;  
    max-flap 17.0 ;  
    reach-decay 200;  
    unreach-decay 800;  
    keep-history 2000;  
};
```

## See Also

“Chapter 34 Route Flap Damping” on page 163 of *Configuring GateD*

`keep-history` on page 709

`max-flap` on page 710

`reach-decay` on page 711

`reuse-below` on page 712

`suppress-above` on page 713

`unreach-decay` on page 714

## keep-history

### Name

`keep-history` - the time (in seconds) for which any history of a route's instability is maintained

### Syntax

```
keep-history time ;
```

### Parameters

*time* - time in seconds

### Description

`keep-history` is the time (in seconds) for which any history of a route's instability is maintained.

### Defaults

```
keep-history 1600;
```

### Context

`dampen-flap` statement

### Examples

```
dampen flap{
    suppress-above 3.0 ;
    reuse-below 2.0 ;
    reach-decay 300;
    unreach-decay 900;
    keep-history 1600;
};
```

### See Also

"Chapter 34 Route Flap Damping" on page 163 of *Configuring GateD*

`dampen-flap` on page 707

## max-flap

### Name

**max-flap** - the maximum value of a route's instability history

### Syntax

```
max-flap flap-metric ;
```

### Parameters

*flap-metric* - the state that is kept on a per-route basis. This metric increases by 1 each time a route transitions from a reachable state to an unreachable state.

### Description

**max-flap** is the maximum value of a route's instability history. **max-flap**, which must be greater than the **suppress-above** threshold, determines the longest time that a route may be suppressed.

### Defaults

```
max-flap 16.0 ;
```

### Context

**dampen-flap** statement

### Examples

```
dampen flap{  
    suppress-above 3.0 ;  
    reuse-below 2.0 ;  
    max-flap 16.0 ;  
};
```

### See Also

"Chapter 34 Route Flap Damping" on page 163 of *Configuring GateD*

**dampen-flap** on page 707

## reach-decay

### Name

**reach-decay** - the time (in seconds) after which a reachable route's instability history decays to half its current value

### Syntax

```
reach-decay time ;
```

### Parameters

*time* - time in seconds

### Description

**reach-decay** is the time (in seconds) after which a reachable route's instability history decays to half its current value.

### Defaults

```
reach-decay 300 ;
```

### Context

**dampen-flap** statement

### Examples

```
dampen flap{
    suppress-above 3.0 ;
    reuse-below 2.0 ;
    reach-decay 300;
};
```

### See Also

"Chapter 34 Route Flap Damping" on page 163 of *Configuring GateD*

**dampen-flap** on page 707

## reuse-below

### Name

**reuse-below** - value of a route's instability, below which a suppressed route is reused

### Syntax

```
reuse-below flap-metric ;
```

### Parameters

*flap-metric* - the state that is kept on a per-route basis. This metric increases by 1 each time a route transitions from a reachable state to an unreachable state.

### Description

**reuse-below** is the value, specified in base-exponent form, of a route's instability, below which a suppressed route is reused. This parameter must be less than the **suppress-above** threshold.

### Defaults

```
reuse-below 2.0 ;
```

### Context

**dampen-flap** statement

### Examples

```
dampen flap {  
    suppress-above 3.0 ;  
    reuse-below 2.0 ;  
};
```

### See Also

"Chapter 34 Route Flap Damping" on page 163 of *Configuring GateD*

**dampen-flap** on page 707

## suppress-above

### Name

**suppress-above** - value of a route's instability, above which the route is suppressed

### Syntax

```
suppress-above flap-metric ;
```

### Parameters

*flap-metric* - the state that is kept on a per-route basis. This metric increases by 1 each time a route transitions from a reachable state to an unreachable state.

### Description

**suppress-above** is the value, specified in base-exponent form, of a route's instability, above which the route is suppressed.

### Defaults

```
suppress-above 3.0 ;
```

### Context

**dampen-flap** statement

### Examples

```
dampen flap{  
    suppress-above 3.0 ;  
    reuse-below 2.0 ;  
};
```

### See Also

"Chapter 34 Route Flap Damping" on page 163 of *Configuring GateD*

**dampen-flap** on page 707

## unreach-decay

### Name

**unreach-decay** - the time (in seconds) after which an unreachable route's instability history decays to half its current value

### Syntax

```
unreach-decay time ;
```

### Parameters

*time* - time in seconds

### Description

**unreach-decay** is the time (in seconds) after which an unreachable route's instability history decays to half its current value.

### Defaults

```
unreach-decay 900;
```

### Context

**dampen-flap** statement

### Examples

```
dampen flap {  
    suppress-above 3.0 ;  
    reuse-below 2.0 ;  
    reach-decay 300 ;  
    unreach-decay 900 ;  
};
```

### See Also

"Chapter 34 Route Flap Damping" on page 163 of *Configuring GateD*

**dampen-flap** on page 707