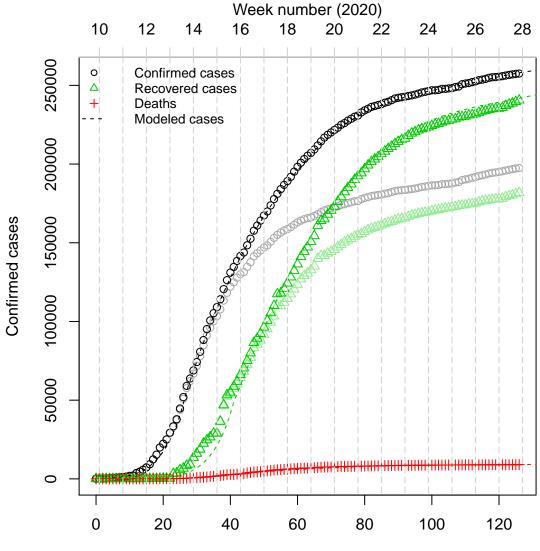
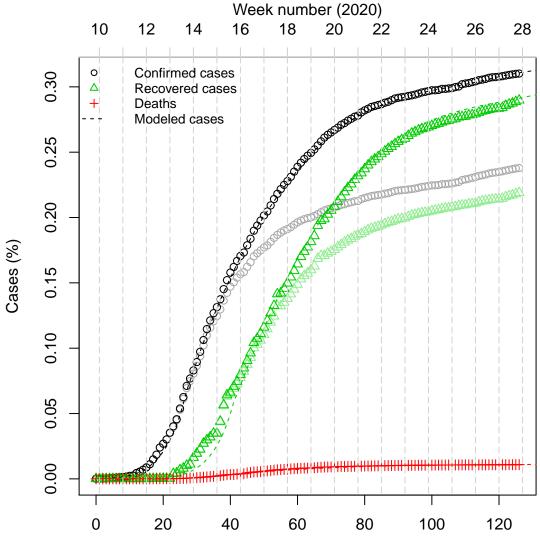
#### Situation vs Model COVID-19 in Germany

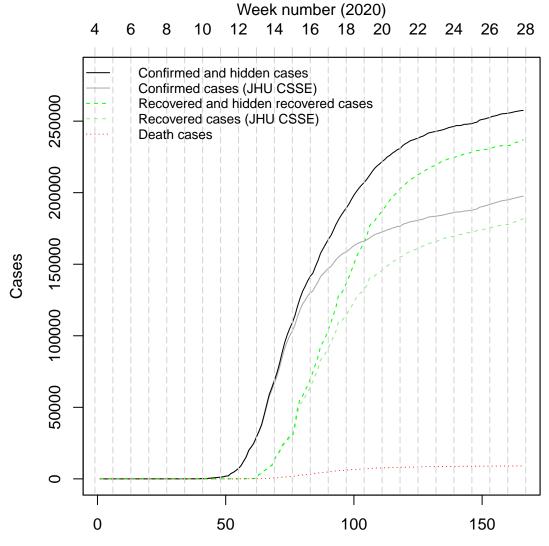


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#### Situation vs Model COVID-19 in Germany



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Days after 1/22/20

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### Situation COVID-19 in Germany Week number (2020) 10 22 24 26 28 Confirmed cases 0 Recovered cases 1st phase (diffusion / no with 2nd phase (uncontrolled granth) 3rd phase (social distancing) 4th phase (lockdown) 10 4th phase (lockdown) 5th phase (exit from lockdown) $\infty$ ဖ

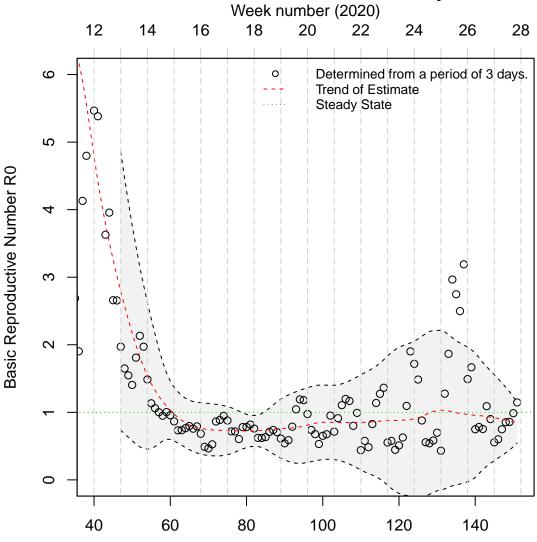
 $\alpha$ 

0

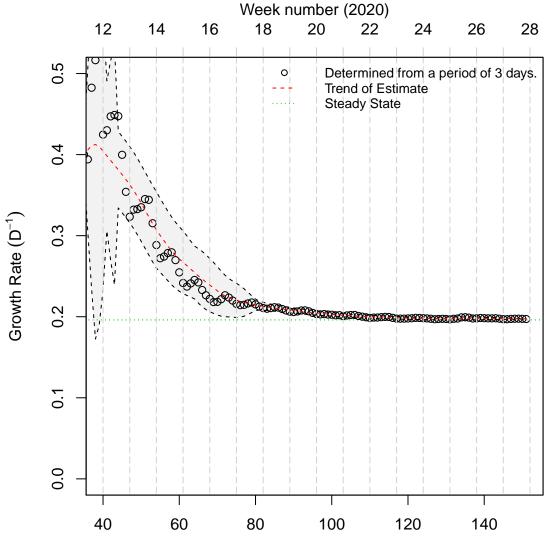
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Days after 1/22/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

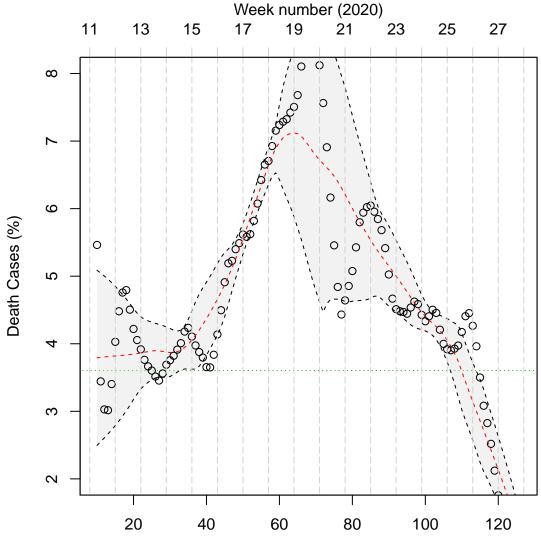
150



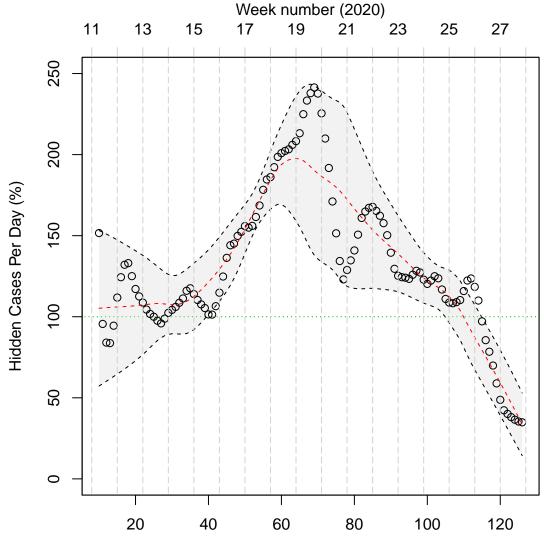
Days after 2/5/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de



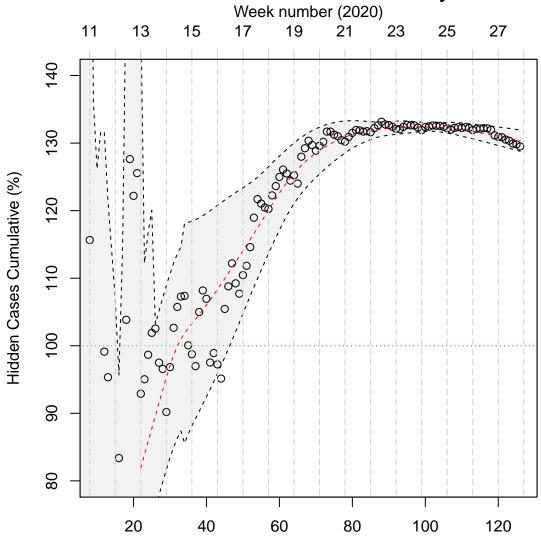
Days after 2/5/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de



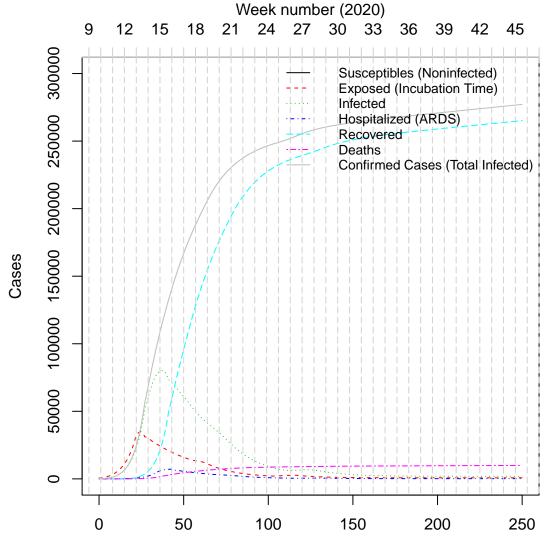
Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de



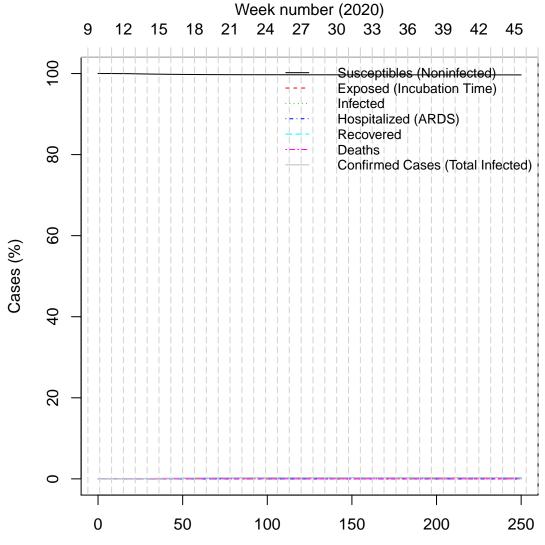
Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de



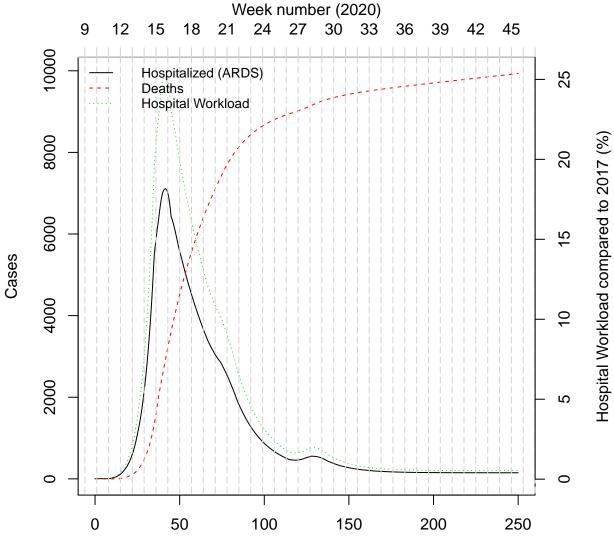
Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de



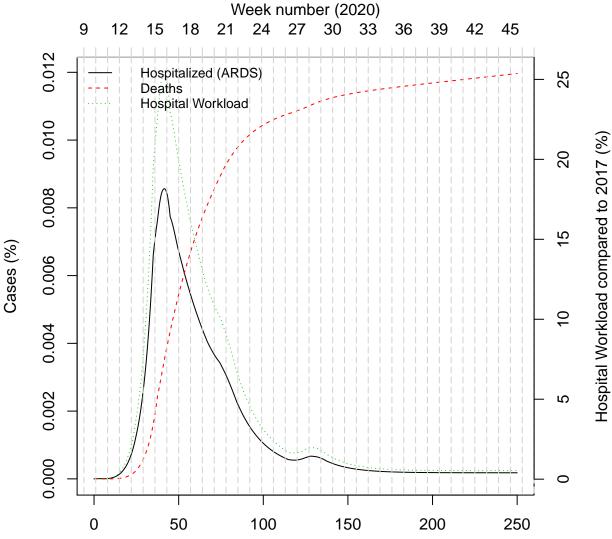
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#### Scenario 1 no social distancing and no lockdown Week number (2020) 24 45 12 15 18 21 36 39 42 8e+07 Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) 6e+07 Cases 4e+07 2e+07 00+<del>0</del>0

Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

0

#### Scenario 1 no social distancing / no lockdown Week number (2020) Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) Cases (%)

Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

## Scenario 1 no social distancing and no lockdown Week number (2020) 45 12 15 18 36 4000 Hospitalized (ARDS) Deaths 5e+06 Hospital Workload Hospital Workload compared to 2017 (%) 4e+06 3e+06 Cases 2000 2e+06 1e+06 0e+00

Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

150

200

100

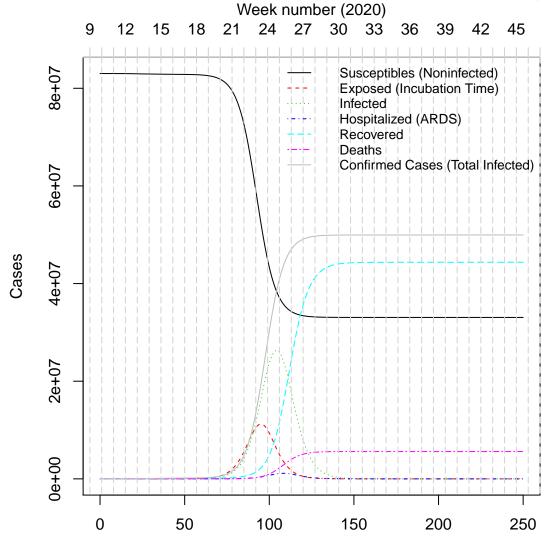
0

50

## Scenario 1 no social distancing and no lockdown Week number (2020) Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) Cases (%) $\alpha$

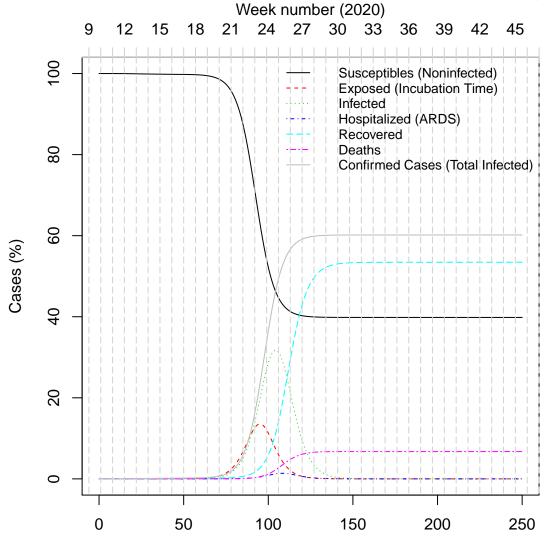
Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

#### Scenario 2 exit after day 50 without social distancing



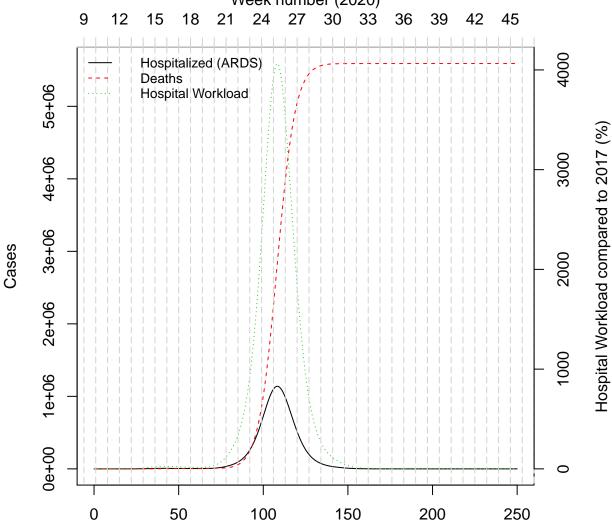
Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

#### Scenario 2 exit after day 50 without social distancing



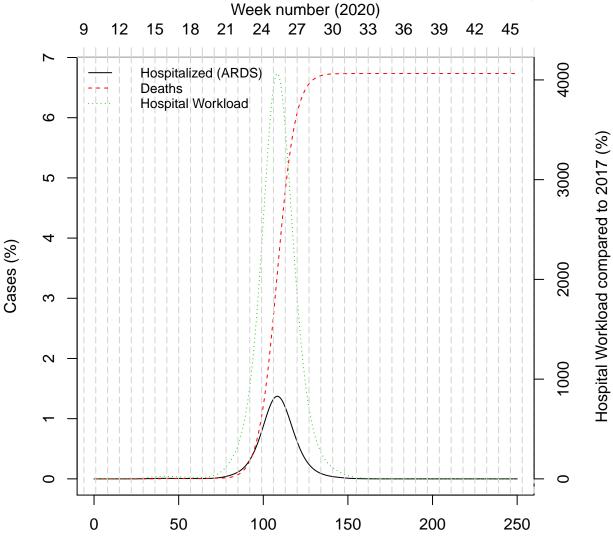
Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

## Scenario 2 exit after day 50 without social distancing Week number (2020)



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## Scenario 2 exit after day 50 without social distancing



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#### Scenario 3 exit after day 50 with social distancing Week number (2020) 9 24 45 12 15 18 36 39 42 8e+07 Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) 6e+07 Cases 4e+07 2e+07 00+<del>0</del>0

Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

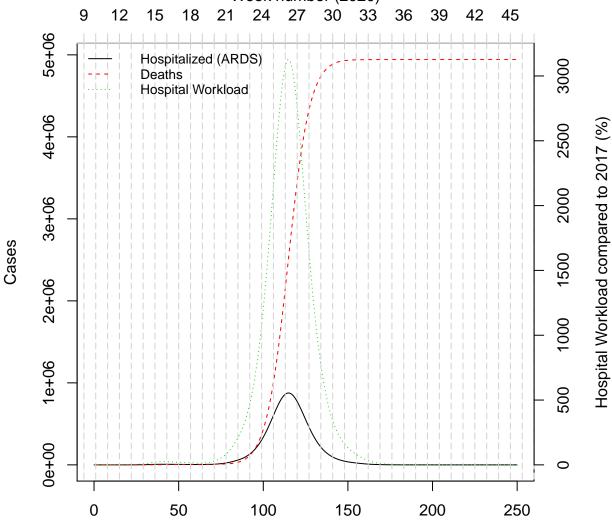
100

0

#### Scenario 3 exit after day 50 with social distancing Week number (2020) Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) Cases (%)

Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

# Scenario 3 exit after day 50 with social distancing Week number (2020)



Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

## Scenario 3 exit after day 50 with social distancing Week number (2020) Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) Cases (%) ന

Days after 3/1/20 Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

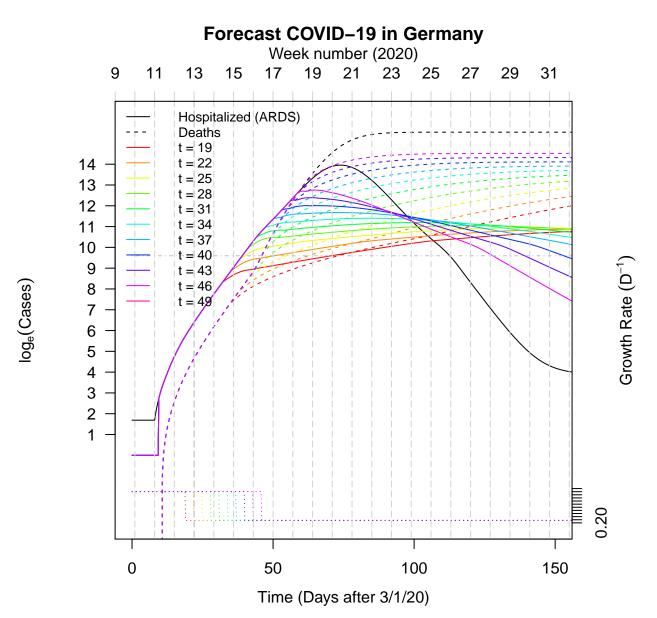
#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 Hospitalized (ARDS) 5500000 Deaths R0 = 0.45000000 R0 = 0.6R0 = 0.84500000 R0 = 1R0 = 1.24000000 R0 = 1.4R0 = 1.63500000 R0 = 1.8Growth Rate $(\mathsf{D}^{-1})$ R0 = 23000000 R0 = 2.2R0 = 2.42500000 2000000 1500000 1000000 500000 0 0.32 0 50 100 150 Time (Days after 3/1/20)

Created by Sören Thiering (07/07/2020). Email: soeren.thiering@hs-anhalt.de

#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 Hospitalized (ARDS) 5500000 Deaths t = 195000000 t = 22t = 254500000 t = 28t = 31 4000000 t = 34t = 373500000 t = 40Growth Rate (D<sup>-1</sup>) t = 433000000 t = 462500000 t = 492000000 1500000 1000000 500000 0 0.20 150 0 50 100

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Time (Days after 3/1/20)



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