

Exploratory Data Analysis on CDETS by Hops

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Introduction

CDETS is a centralized application to track all types of defects across all CISCO products. The application captures many fields some of them are mandatory and important while some of them are ancillary info and not mandatory. Looking at this data can provide many useful insights on the defects life cycle and how they are handled.

The goal of the exercise perform hop analysis on defects that reached terminal state (M,R,V,C,J,U,D).

Synopsis

For the analysis the CDETS defects data is extracted for the period 2018-01-01 till 2018-12-31 for each of the PIN under EN org using PIN to bug query and defect severity of type 1, 2, 3 and defect status in (M,R,V,C,J,U,D). This is to include defects that are created before 2016 but had some update in 2018. The analysis was performed at EN org, PIN level and DE manager level (the last assigned DE manager on a defect).

Data Analysis

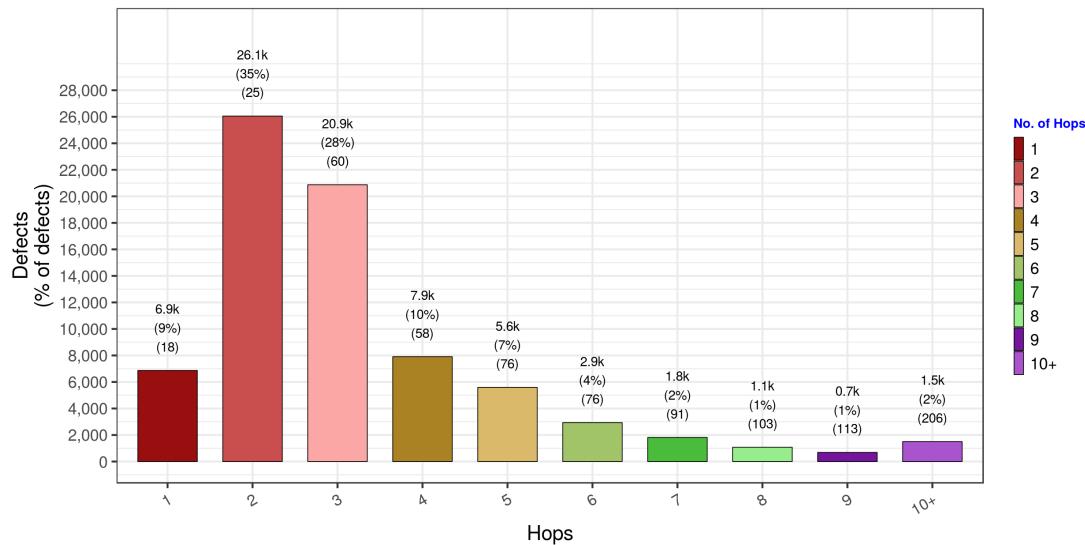
Hop by Year (2018)

Observations:

1. 62% of defects are resolved by 3 hops.
2. Most of the tickets are resolved in hop 2. 9% of tickets resolved in hop 1. 2% of tickets go over hop 10.
3. The more hops it takes to resolve a defect the more time it takes.
4. Hop 3 takes more time than hop 4 and it is because of Validation hops (referred to chart tm3).

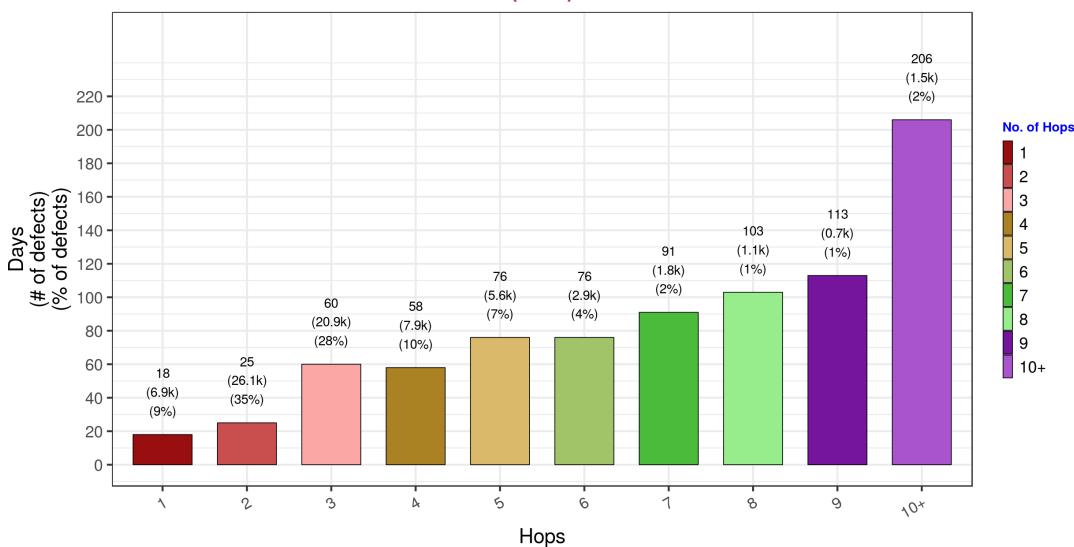
tn

**Defects by Number of Hops by Year
(2018)**



tm

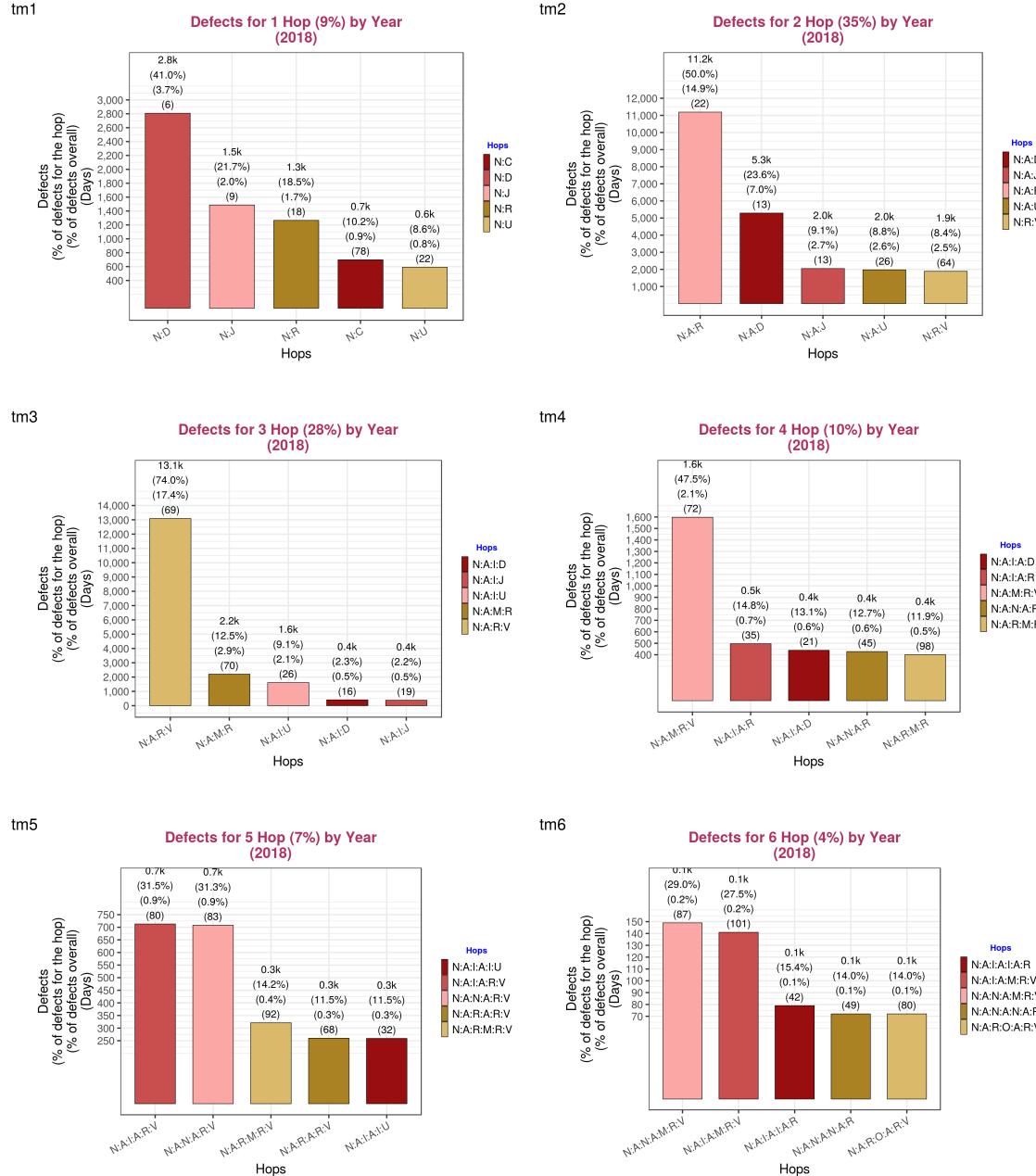
**Average Days by Number of Hops by Year
(2018)**



Top 5 State Changes by Number of Hops by Year (2018)

Observations:

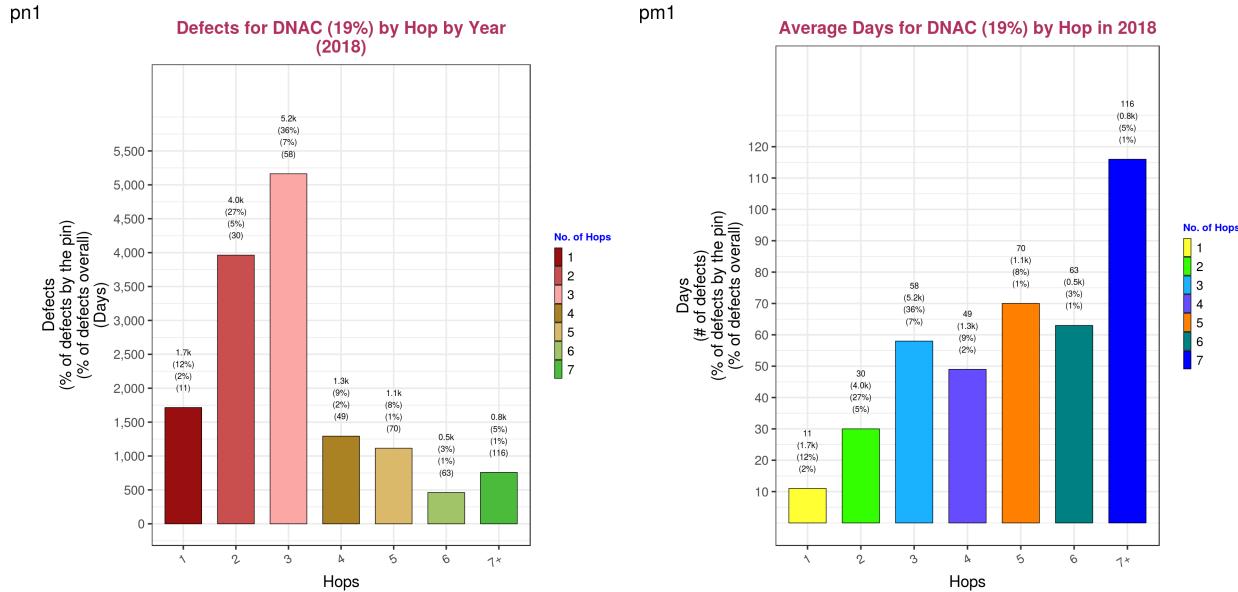
1. Top contributor in hop 1 is N:D (41%), hop 2 N:A:R (50%), hop 3 N:A:R:V (74%), hop 4 N:A:M:R:V (47.5%).



Hops by PIN by Year (2018)

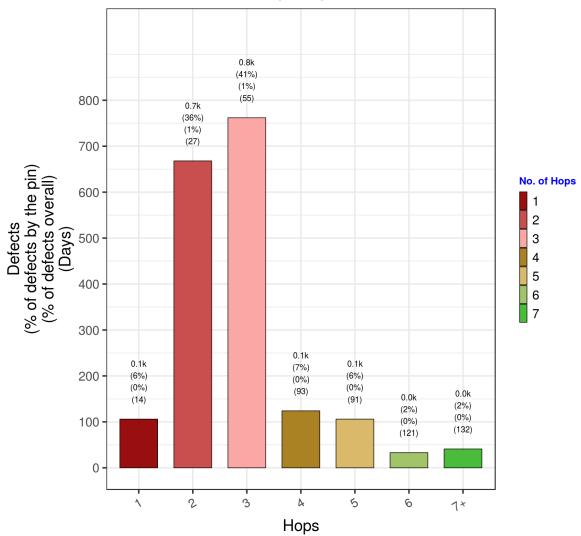
Observations:

1. Tickets resolved by 3 hops by pin are DNAC 75%, IOT 83%, Prim-Infra 69%, Routing 72%, SPA 72%, Switching 70%, Viptela 85%, Wireless 68%, XI-PI-Common 62%, XI-PI-Polaris 69%.
2. Tickets resolved on 1st hop by pin are DNAC 12%, IOT 6%, Prime-Infra 8%, Routing 8%, SPA 11%, Switching 4%, Viptela 31%, Wireless 7%, XI-PI-Common 3%, XI-PI-Polaris 8%.
2. Tickets resolved in 7 and more hops by pin are DNAC 5%, IOT 2%, Prime-Infra 8%, Routing 7%, SPA 6%, Switching 7%, Viptela 2%, Wireless 8%, XI-PI-Common 10%, XI-PI-Polaris 9%, the odd number hops take more time than hops with even numbers.
3. On DNAC odd number of hops take more time than even number hops.
4. On SPA hop 1 and 2 take similar time (98 and 92 resp.) and hop 3 takes less time to resolve (63 days). In general upto 6 hops the time taken appear similar.
5. On Switching hop 1 and 2 take similar time (18 and 21 days). And odd number of hops taking more than even number of hops.
6. On Viptela and XI-PI-Common the time increases linearly with number of hops.
7. On Wireless hop 3 takes considerably more time (66 days) than hop 2 (16 days) compared to any other PIN.



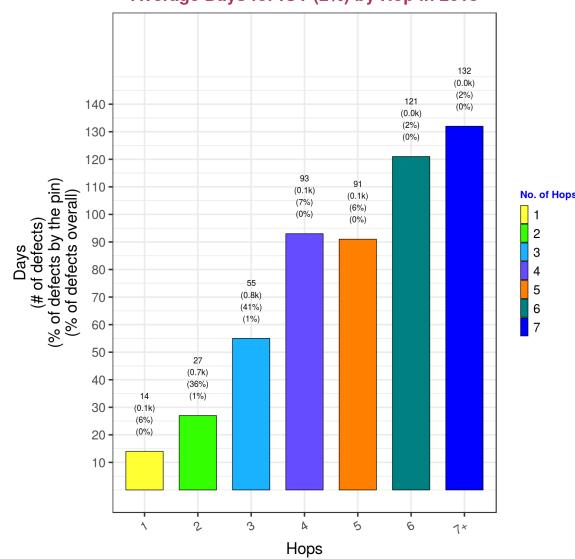
pn2

Defects for IOT (2%) by Hop by Year (2018)



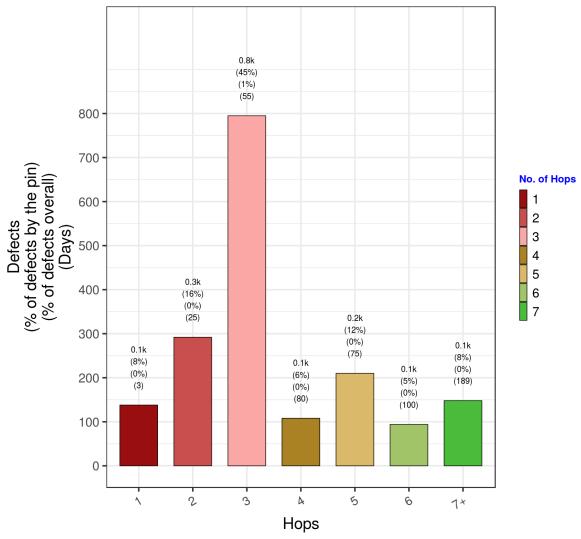
pm2

Average Days for IOT (2%) by Hop in 2018



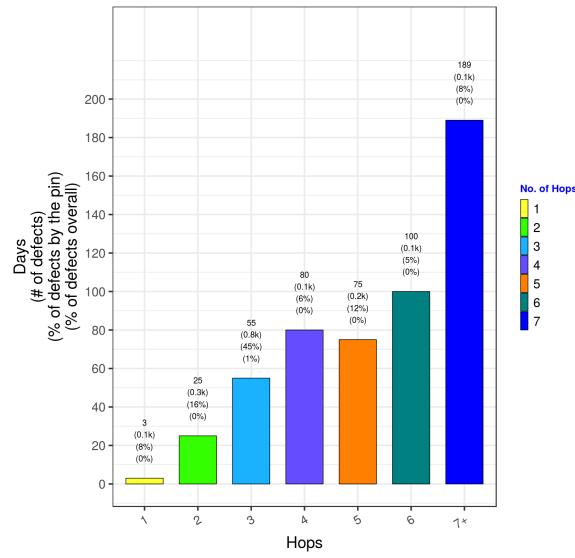
pn3

Defects for Prime-Infra (2%) by Hop by Year (2018)



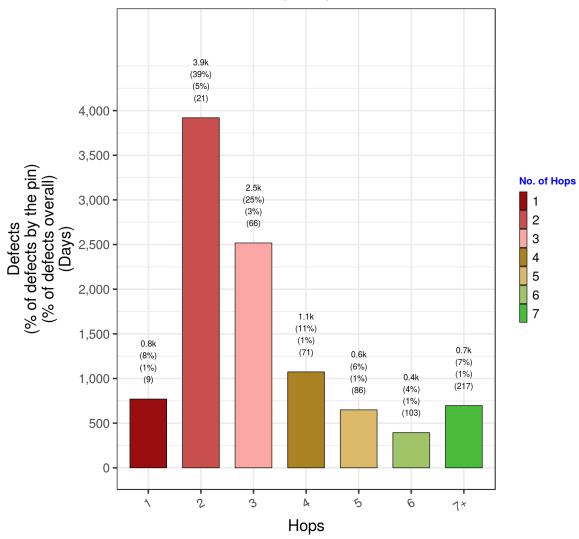
pm3

Average Days for Prime-Infra (2%) by Hop in 2018



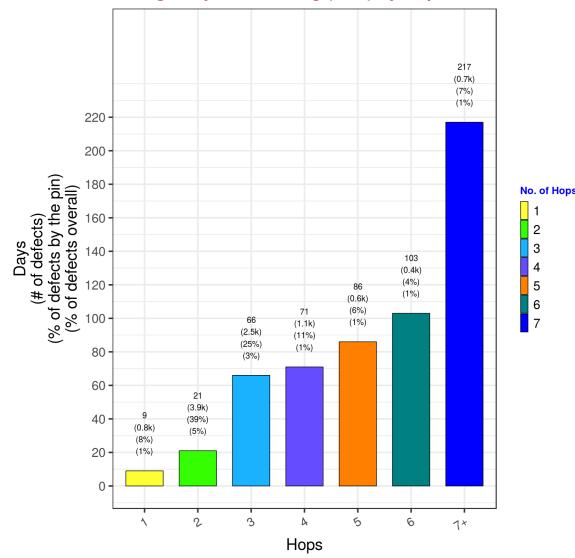
pn4

Defects for Routing (13%) by Hop by Year (2018)



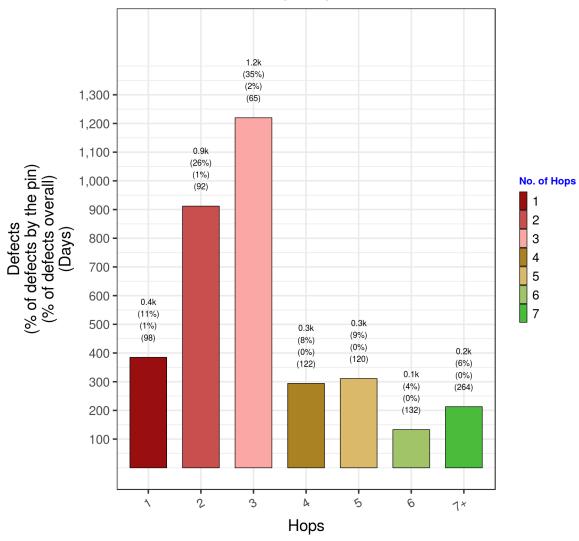
pm4

Average Days for Routing (13%) by Hop in 2018



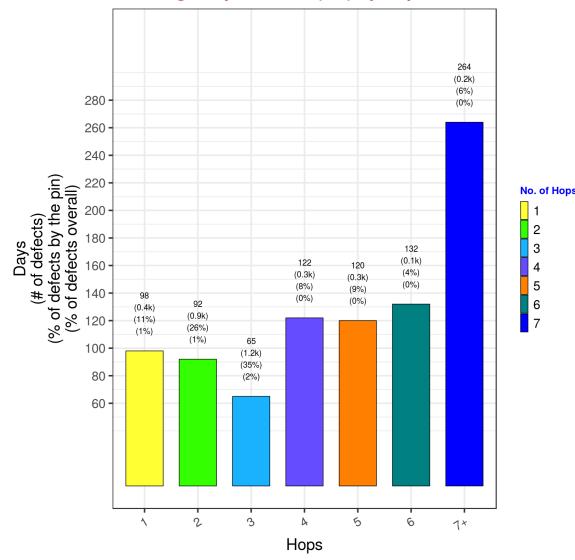
pn5

Defects for SPA (5%) by Hop by Year (2018)

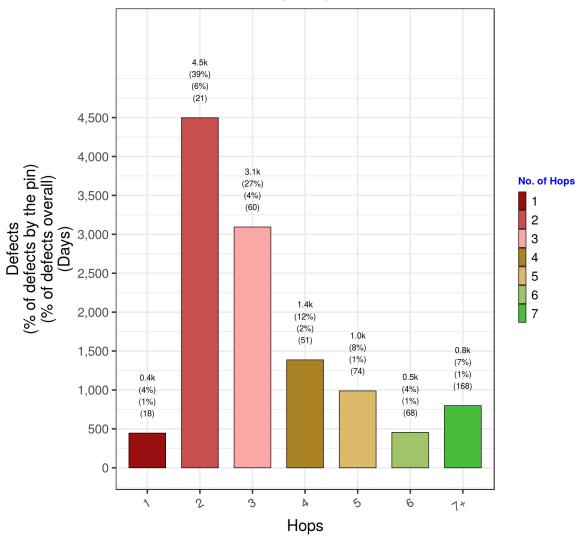


pm5

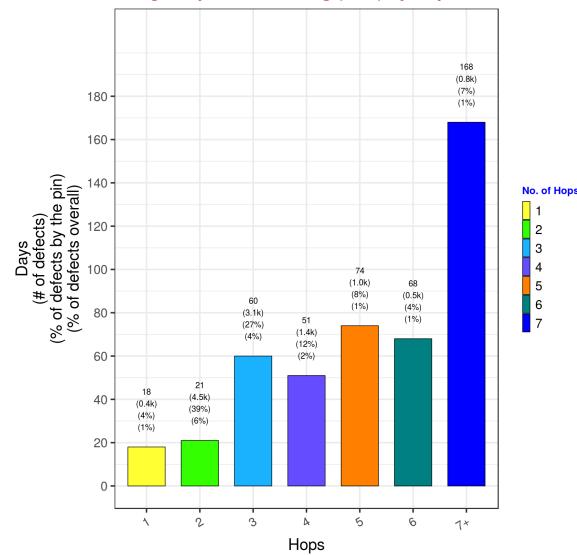
Average Days for SPA (5%) by Hop in 2018



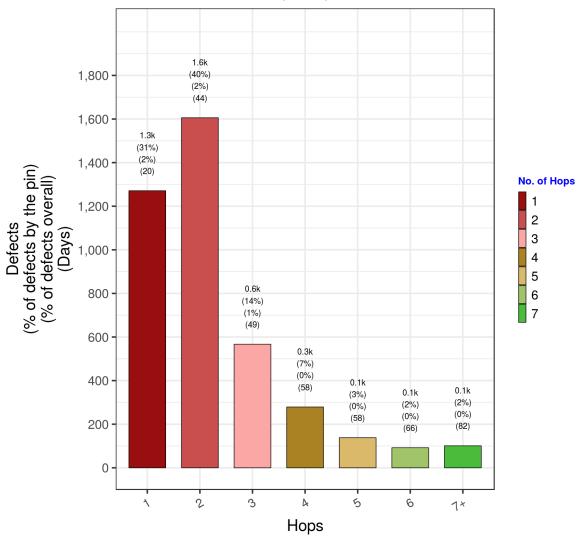
pn6

Defects for Switching (15%) by Hop by Year (2018)

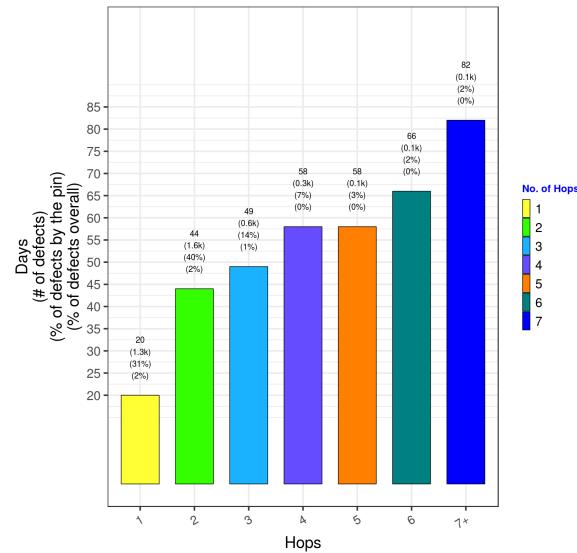
pm6

Average Days for Switching (15%) by Hop in 2018

pn7

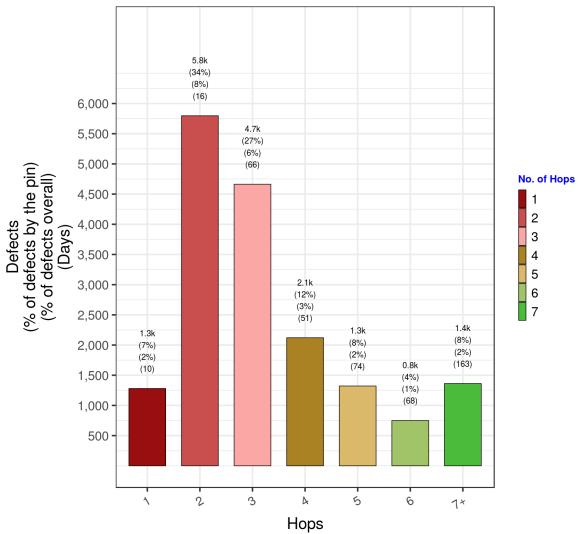
Defects for Viptela (5%) by Hop by Year (2018)

pm7

Average Days for Viptela (5%) by Hop in 2018

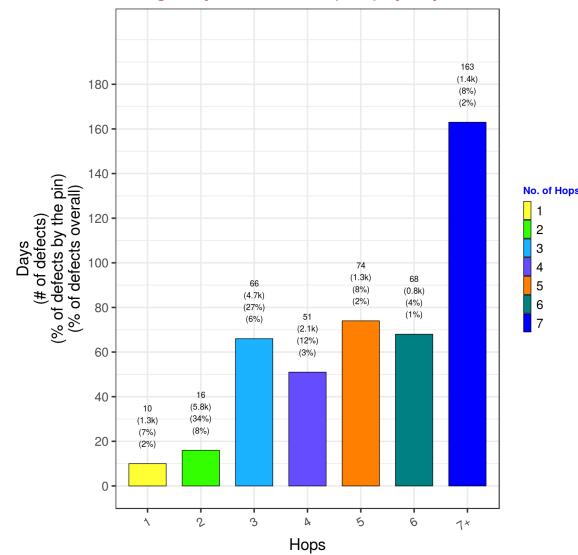
pn8

Defects for Wireless (23%) by Hop by Year (2018)



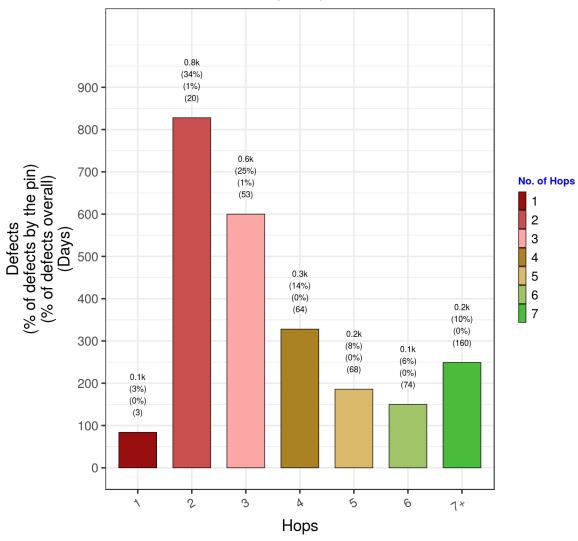
pm8

Average Days for Wireless (23%) by Hop in 2018



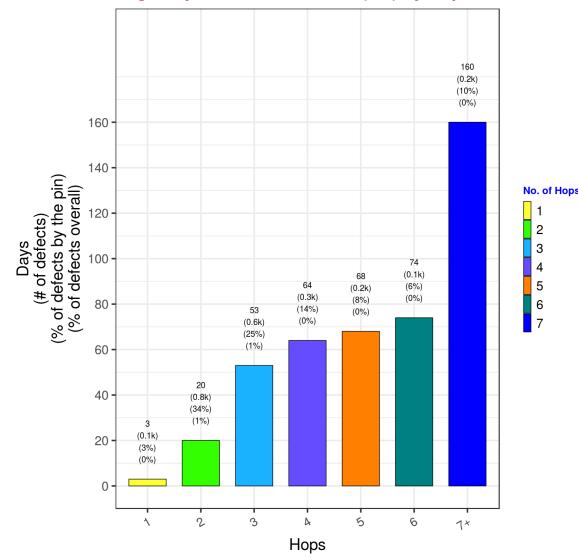
pn9

Defects for XI-PI-Common (3%) by Hop by Year (2018)

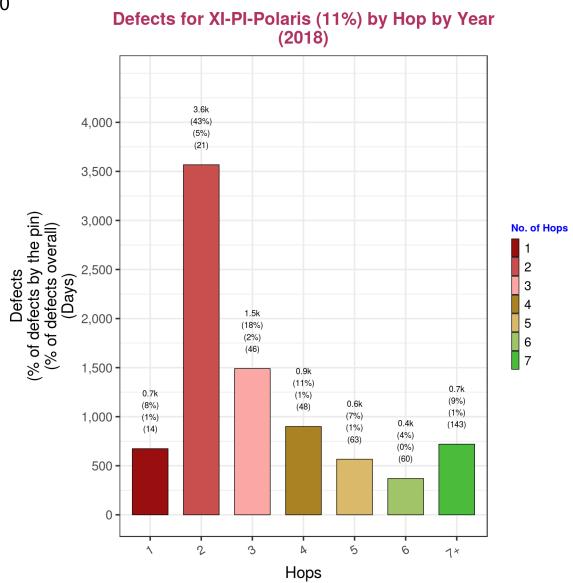


pm9

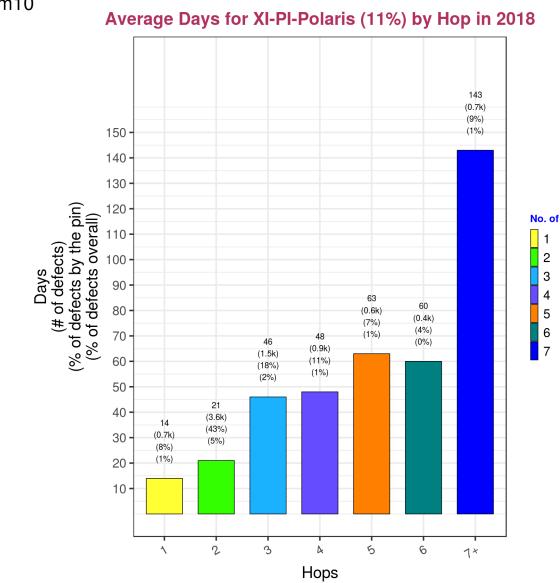
Average Days for XI-PI-Common (3%) by Hop in 2018



pn10



pm10

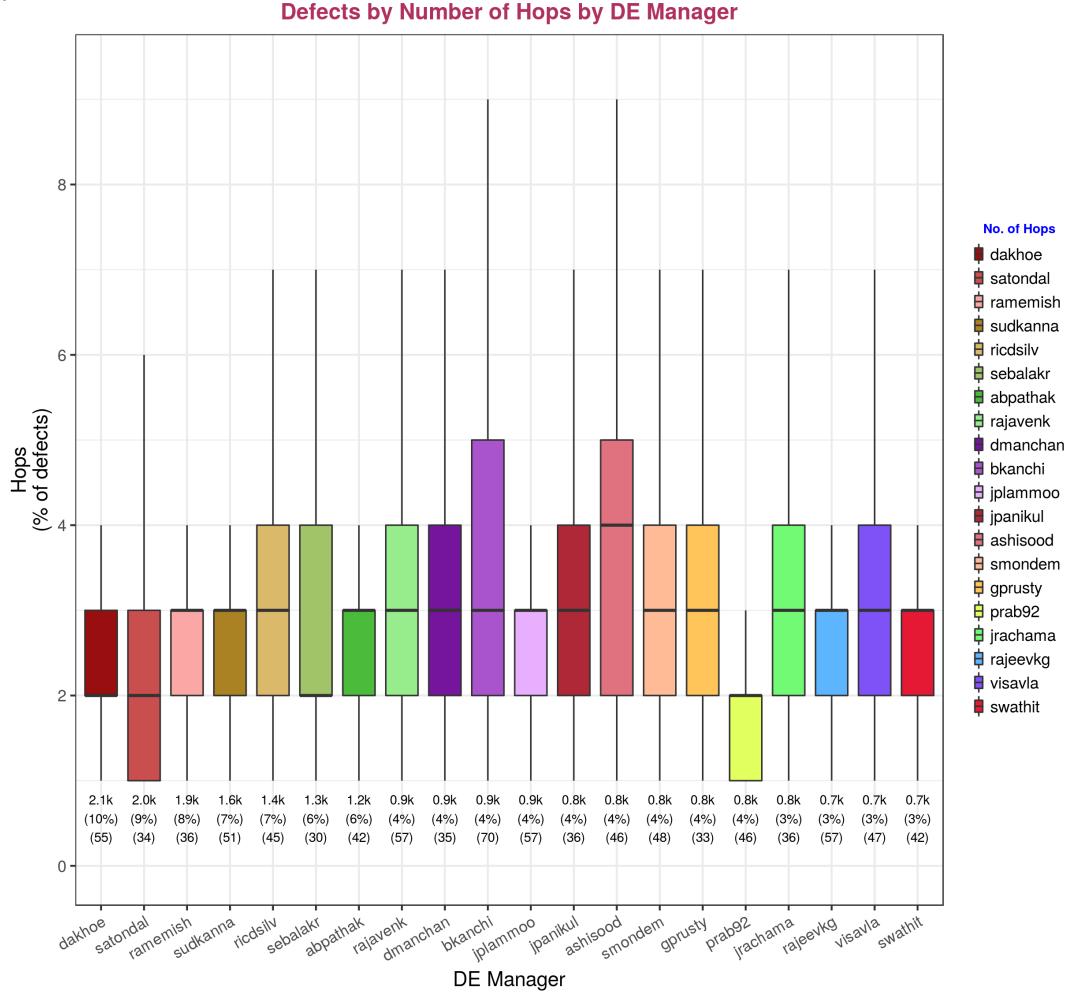


Hops by DE Manager (top tickets) by Year (2018)

Observations:

1. prab92 resolves 25% of the defects in hop 1 and 75% of defects in hop 2.
2. satondal resolves 25% of the defects in hop 1, 50% of defects in hop 2 and 75 % of defects in hop 3.
3. All other DE Managers except (prab92, satondal) resolve 25% of defects in hop 2.
4. bkanchi and jpanikul take 5 hops to resolve 75% of tickets.

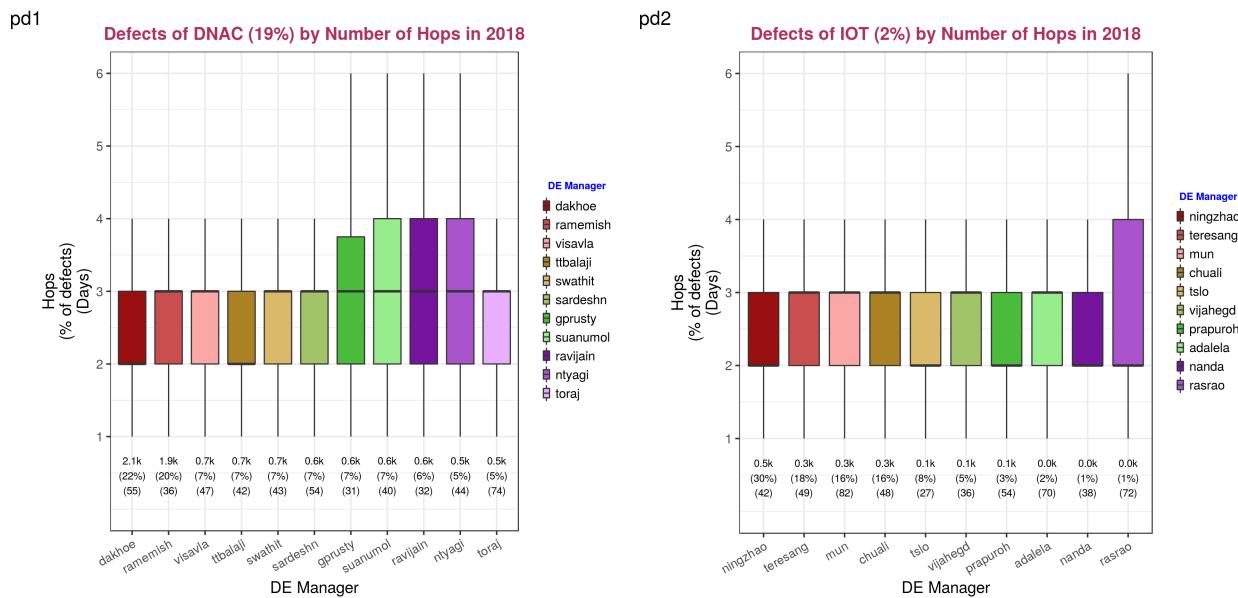
yh1



Hops by DE Manager by PIN by year (2018)

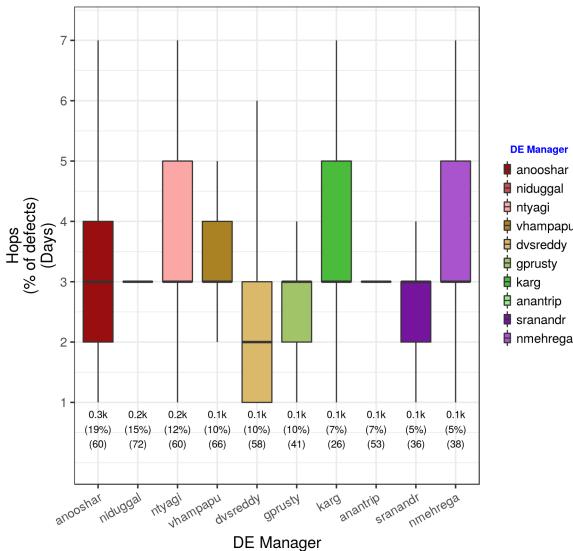
Observations:

1. On DNAC gprusty, suanumol, ravijain, ntyagi take 4 hops to resolve 75% of defects.
2. On IOT rasrao take 4 hops to resolve 75% of defects.
3. On Prime-Infra ntyagi, karg, nmehrega take 5 hops to resolve 75% of defects.
4. On Routing jimchu, ritu, tjaafar, alanwan take 4 hops to resolve 75% of defects.
5. On Switching rajavenk, jpanikul, jrachama, wanzyu, sonle take 4 hops to resolve 75% of defects.
6. On Viptela satondal, lavr take 3 hops to resolve 75% of tickets.
7. On Wireless bkanchi, ashisood take 5 hops to resolve 75% of tickets.
8. On XI-PI-Common dprairie take 5 hops to resolve 75% of tickets.
9. On XI-PI-Polaris dmangkan, vtrivedi, jnalthoo, amnady, sgharat take 4 hops to resolve 75% of tickets.
10. niduggal and anantrip resolve most of the tickets on hop 3, while nshirbha takes 2 hops.
11. prashar resolves 25% of defects in hop 1.



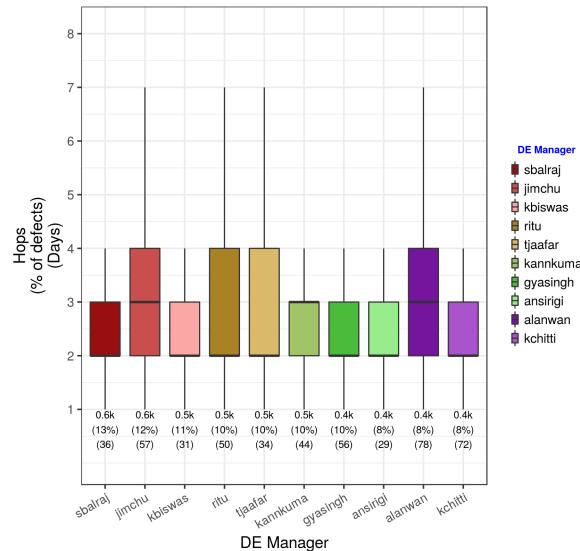
pd3

Defects of Prime-Infra (2%) by Number of Hops in 2018



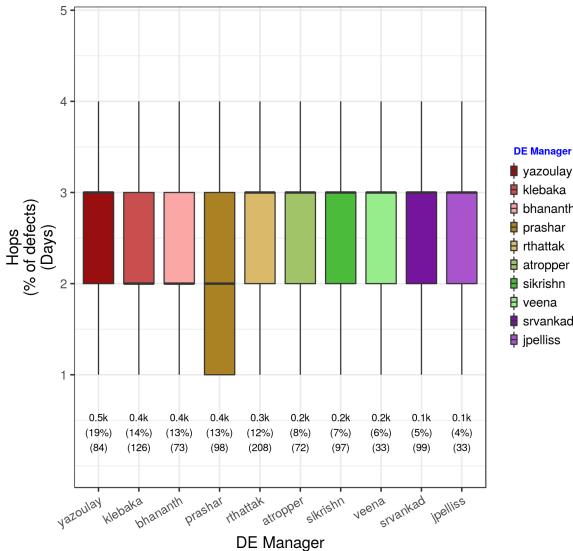
pd4

Defects of Routing (13%) by Number of Hops in 2018



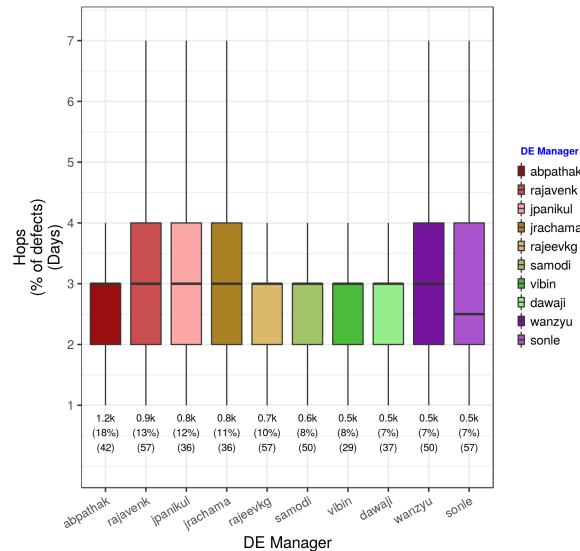
pd5

Defects of SPA (5%) by Number of Hops in 2018



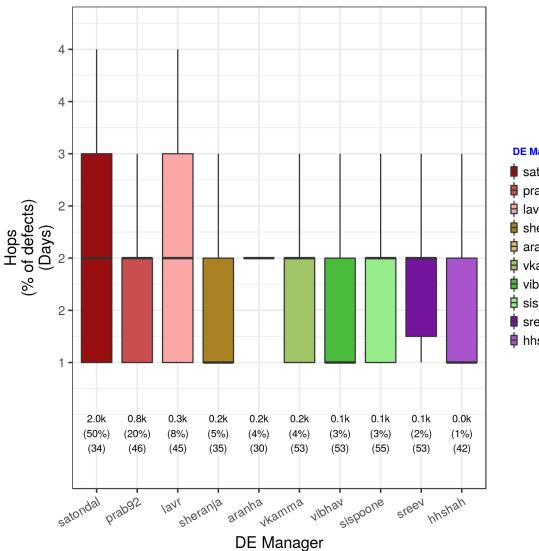
pd6

Defects of Switching (15%) by Number of Hops in 2018



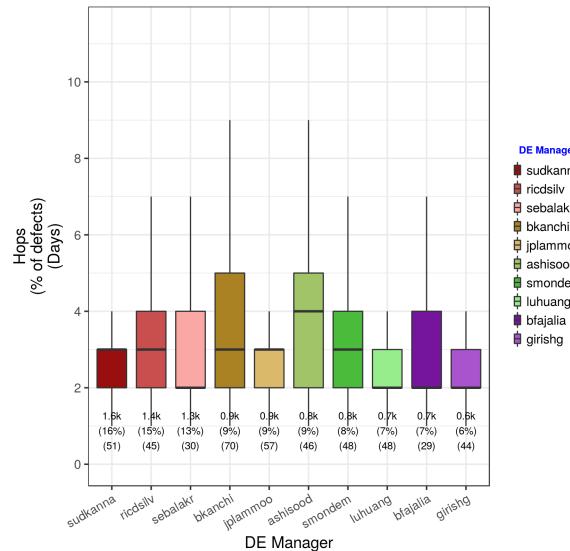
pd7

Defects of Viptela (5%) by Number of Hops in 2018



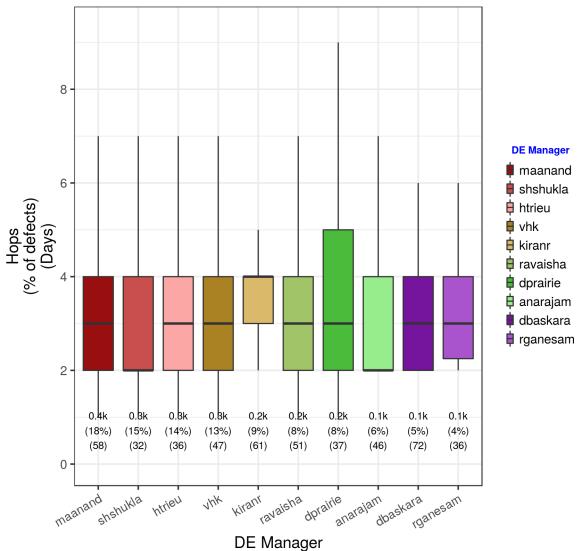
pd8

Defects of Wireless (23%) by Number of Hops in 2018



pd9

Defects of XI-PI-Common (3%) by Number of Hops in 2018



pd10

Defects of XI-PI-Polaris (11%) by Number of Hops in 2018

