

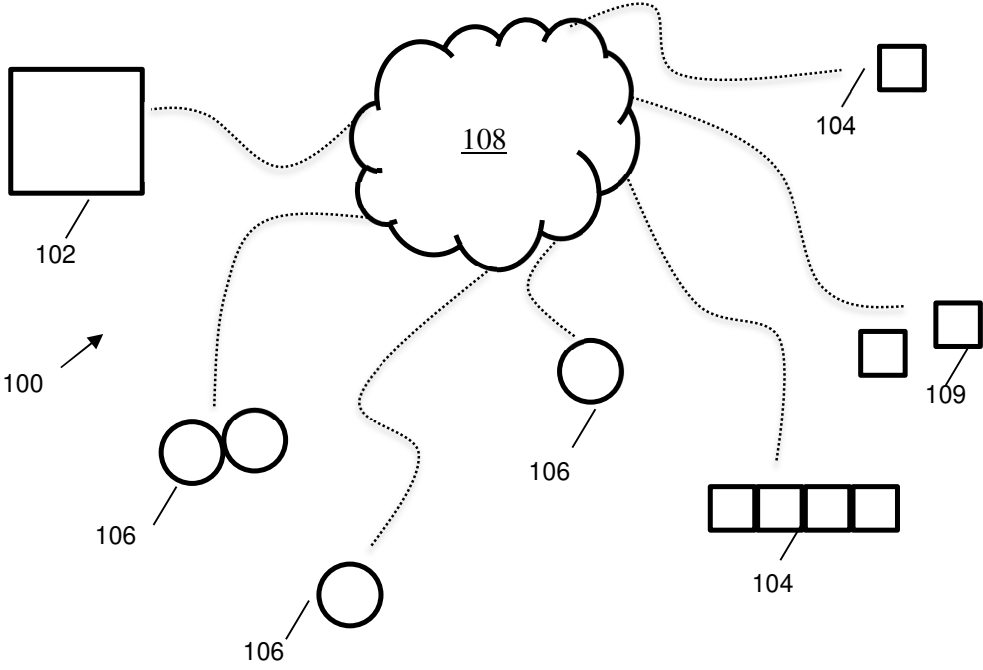


Fig. 1

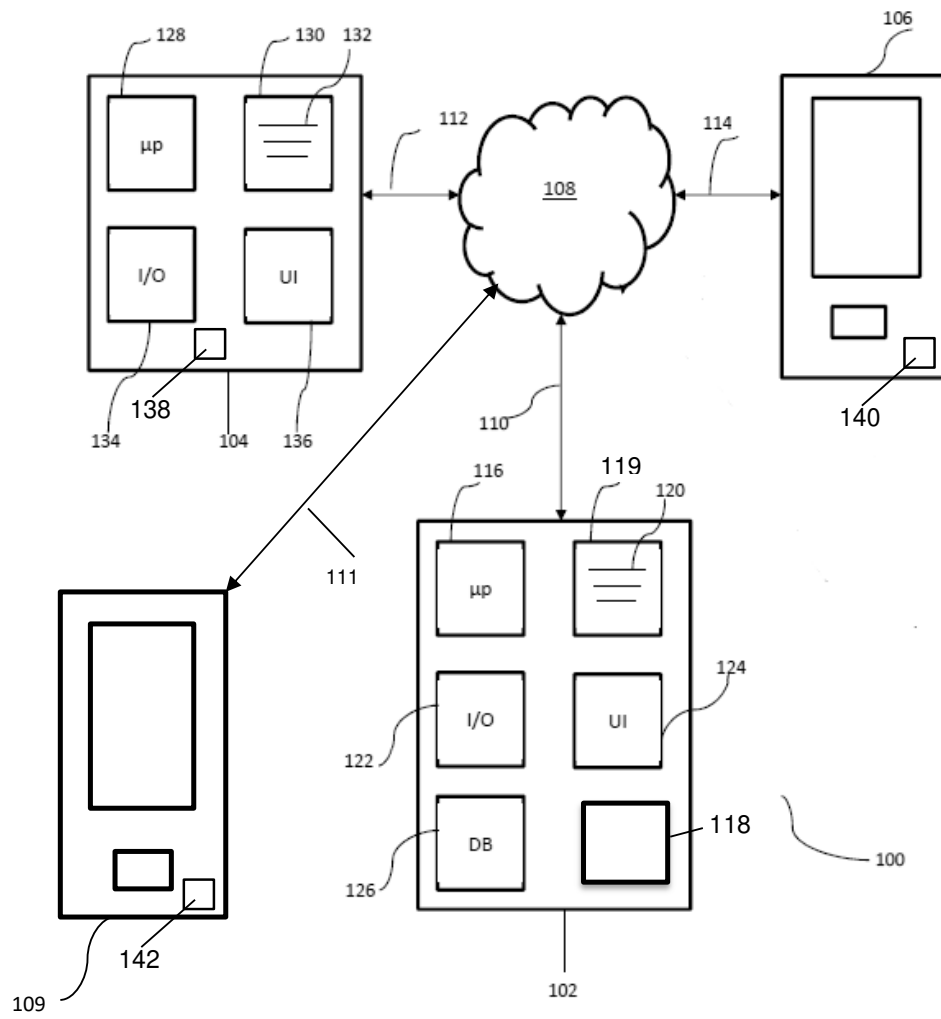


Fig. 2

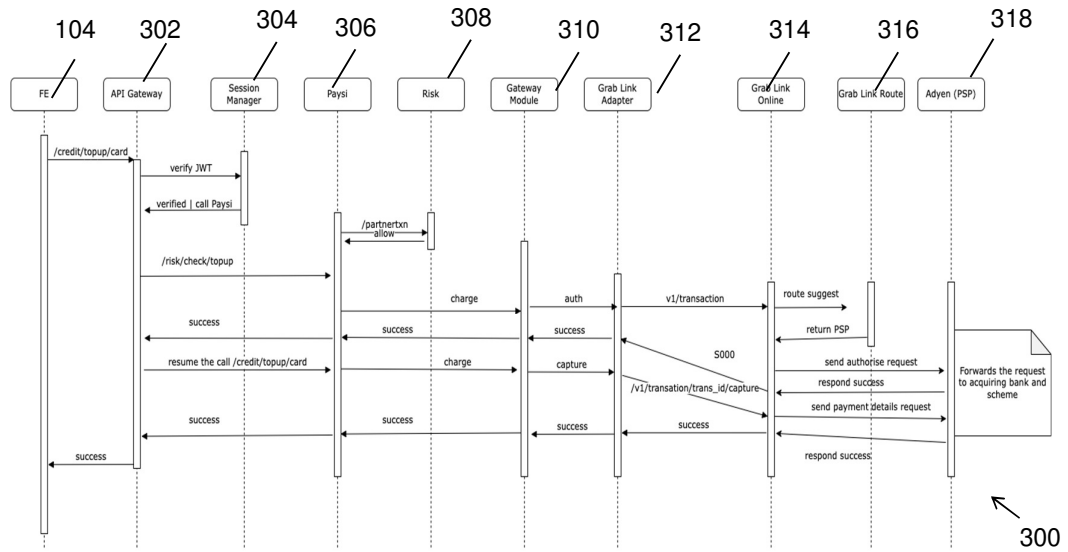


Fig. 3

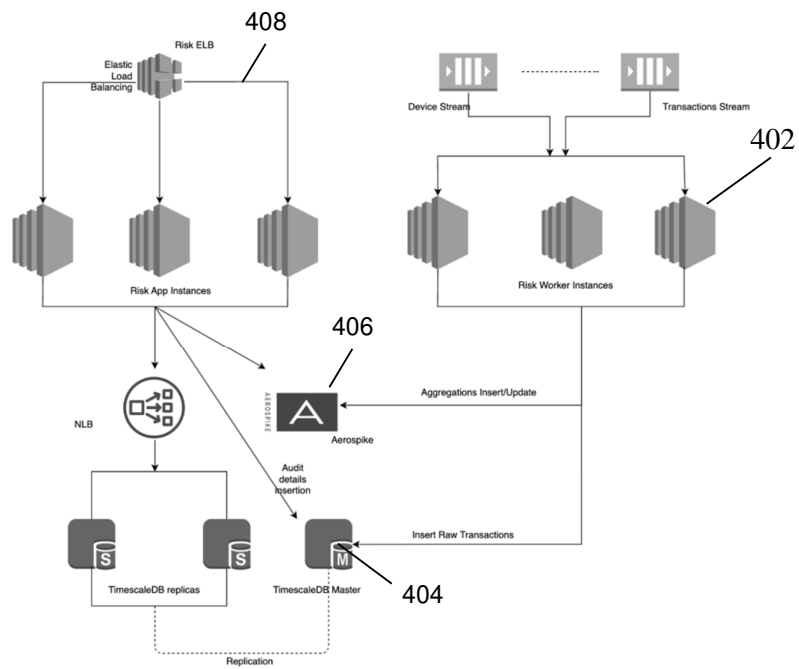


Fig. 4

"103158129":

```
{
  "v2": {
    "2022": {
      "deviceId": {
        "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
          "status": {
            "success": {
              "c": 8,
              "amt": 190
            },
            "failed": {
              "c": 8,
              "amt": 270
            }
          }
        },
        "64901b8f19bf5d2eef77316f14b5327b1fd3dd15": {
          "status": {
            "success": {
              "c": 8,
              "amt": 190
            },
            "failed": {
              "c": 8,
              "amt": 270
            }
          }
        },
        "7bcf0dcd67f74a40942815b50f0a6c72abcd30bc": {
          "status": {
            "success": {
              "c": 8,
              "amt": 190
            },
            "failed": {
              "c": 8,
              "amt": 270
            }
          }
        }
      }
    },
    "2022-07": {
      "deviceId": {
        "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
          "status": {
            "success": {
              "c": 5,
              "amt": 100
            },
            "failed": {
              "c": 5,
              "amt": 150
            }
          }
        },
        "64901b8f19bf5d2eef77316f14b5327b1fd3dd15": {
          "status": {
            "success": {
```

Fig. 5a

```

        "c": 5,
        "amt": 100
      },
      "failed": {
        "c": 5,
        "amt": 150
      }
    }
  },
  "7bcf0dcd67f74a40942815b50f0a6c72abcd30bc": {
    "status": {
      "success": {
        "c": 5,
        "amt": 100
      },
      "failed": {
        "c": 5,
        "amt": 150
      }
    }
  }
},
},
"2022-06": {
  "deviceId": {
    "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
      "status": {
        "success": {
          "c": 3,
          "amt": 90
        },
        "failed": {
          "c": 3,
          "amt": 120
        }
      }
    }
  },
  "64901b8f19bf5d2eef77316f14b5327b1fd3dd15": {
    "status": {
      "success": {
        "c": 3,
        "amt": 90
      },
      "failed": {
        "c": 3,
        "amt": 120
      }
    }
  },
  "7bcf0dcd67f74a40942815b50f0a6c72abcd30bc": {
    "status": {
      "success": {
        "c": 3,
        "amt": 90
      },
      "failed": {
        "c": 3,
        "amt": 120
      }
    }
  }
}

```

Fig. 5a (cont.)

```

    }
  }
},
"2022-07-20": {
  "deviceId": {
    "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
      "status": {
        "success": {
          "c": 1,
          "amt": 20
        },
        "failed": {
          "c": 2,
          "amt": 60
        }
      }
    }
  },
  "64901b8f19bf5d2eef77316f14b5327b1fd3dd15": {
    "status": {
      "success": {
        "c": 1,
        "amt": 20
      },
      "failed": {
        "c": 2,
        "amt": 60
      }
    }
  },
  "7bcf0dcd67f74a40942815b50f0a6c72abcd30bc": {
    "status": {
      "success": {
        "c": 1,
        "amt": 20
      },
      "failed": {
        "c": 2,
        "amt": 60
      }
    }
  }
},
}
},
"2022-07-19": {
  "deviceId": {
    "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
      "status": {
        "success": {
          "c": 2,
          "amt": 40
        },
        "failed": {
          "c": 1,
          "amt": 30
        }
      }
    }
  },
  "64901b8f19bf5d2eef77316f14b5327b1fd3dd15": {

```

Fig. 5a (cont.)

```

    "status": {
      "success": {
        "c": 2,
        "amt": 40
      },
      "failed": {
        "c": 1,
        "amt": 30
      }
    }
  },
  "7bcf0dcd67f74a40942815b50f0a6c72abcd30bc": {
    "status": {
      "success": {
        "c": 2,
        "amt": 40
      },
      "failed": {
        "c": 1,
        "amt": 30
      }
    }
  },
  "2022-07-18": {
    "deviceId": {
      "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
        "status": {
          "success": {
            "c": 2,
            "amt": 40
          },
          "failed": {
            "c": 2,
            "amt": 60
          }
        }
      },
      "64901b8f19bf5d2eef77316f14b5327b1fd3dd15": {
        "status": {
          "success": {
            "c": 2,
            "amt": 40
          },
          "failed": {
            "c": 2,
            "amt": 60
          }
        }
      },
      "7bcf0dcd67f74a40942815b50f0a6c72abcd30bc": {
        "status": {
          "success": {
            "c": 2,
            "amt": 40
          },
          "failed": {
            "c": 2,
            "amt": 60
          }
        }
      }
    }
  }
}

```

Fig. 5a (cont.)

```

{
  "sets": [
    {
      "namespace": "risk",
      "configs": {
        "1": {
          "aggregates": [
            {
              "bmks": [
                "c",
                "amt"
              ],
              "entities": [
                "deviceId",
                "currency",
                "status"
              ]
            },
            {
              "bmks": [
                "c",
                "amt"
              ],
              "entities": [
                "deviceId"
              ]
            },
            {
              "bmks": [
                "c",
                "amt"
              ],
              "entities": [
                "deviceId",
                "status"
              ]
            }
          ]
        },
        "2": {
          "aggregates": [
            {
              "bmks": [
                "c",
                "amt"
              ],
              "entities": [
                "cardFingerprint",
                "currency",
                "status"
              ]
            }
          ]
        },
        "3": {
          "aggregates": [
            {
              "bmks": [
                "c",

```

Fig. 5b

```

        "amt"
      ],
      "entities": [
        "ip",
        "currency",
        "status"
      ]
    }
  ]
},
"recordKeyEntities": [
  "from"
]
},
{
  "namespace": "risk",
  "configs": {
    "1": {
      "aggregates": [
        {
          "bmks": [
            "c",
            "amt"
          ],
          "entities": [
            "currency",
            "status"
          ]
        }
      ]
    }
  ]
},
"recordKeyEntities": [
  "deviceId"
]
}
]
}

```

Fig. 5b (cont.)

```

{
  "deviceId": {
    "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
      "c": 1,
      "amt": 10,
      "currency": {
        "SGD": {
          "status": {
            "success": {
              "c": 1,
              "amt": 10
            }
          }
        }
      },
      "status": {
        "success": {
          "c": 1,
          "amt": 10
        }
      }
    }
  }
}

```

Fig. 5c

```

{
  "deviceId": {
    "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
      "c": 1,
      "amt": 10,
      "currency": {
        "SGD": {
          "status": {
            "success": {
              "c": 1,
              "amt": 10
            }
          }
        }
      },
      "status": {
        "success": {
          "c": 1,
          "amt": 10
        }
      }
    }
  }
}

```

Fig. 5d

```

{
  "deviceId": {
    "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
      "c": 1,
      "amt": 10
    }
  }
}

{
  "deviceId": {
    "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
      "currency": {
        "SGD": {
          "status": {
            "success": {
              "c": 1,
              "amt": 10
            }
          }
        }
      }
    }
  }
}

{
  "deviceId": {
    "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
      "status": {
        "success": {
          "c": 1,
          "amt": 10
        }
      }
    }
  }
}

```

Fig. 5e

```
{
  "deviceId": {
    "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
      "c": 1,
      "amt": 10,
      "status": {
        "success": {
          "c": 1,
          "amt": 10,
          "currency": {
            "SGD": {
              "c": 1,
              "amt": 10
            }
          }
        }
      }
    }
  }
}
```

Fig. 5f

```
{
  "deviceId": "Extras.PatronusInfo.DeviceID",
  "from": "FromId",
  "status": "Status",
  "currency": "Currency",
  "cardFingerprint": "PaymentInfo.Fingerprint",
  "ip": "Extras.LocationInfo.IP"
}
```

Fig. 5g

```
{
  "deviceId": "a5da5622790b32a29e3b8533cf54ccb7efc346a4",
  "from": "103182985",
  "status": "success",
  "currency": "SGD",
  "cardFingerprint": "K5+08312THbd",
  "ip": "10.10.57.185"
}
```

Fig. 5h

```
{
  "FromId": "103182985",
  "Status": "success",
  "Currency": "SGD",
  "PaymentInfo": {
    "Fingerprint": "K5+08312THbd"
  },
  "Extras": {
    "PatronusInfo": {
      "DeviceID": "a5da5622790b32a29e3b8533cf54ccb7efc346a4"
    },
    "LocationInfo": {
      "IP": "10.10.57.185"
    }
  }
}
```

Fig. 5i

```

{
  "aggregates": [
    {
      "bmks": [
        "c",
        "amt"
      ],
      "entities": [
        "deviceId",
        "currency",
        "status"
      ]
    },
    {
      "bmks": [
        "c",
        "amt"
      ],
      "entities": [
        "deviceId"
      ]
    },
    {
      "bmks": [
        "c",
        "amt"
      ],
      "entities": [
        "deviceId",
        "status"
      ]
    }
  ]
}

```

Fig. 5j

```

{
  "deviceId": {
    "a5da5622790b32a29e3b8533cf54ccb7efc346a4": {
      "c": 1,
      "amt": 10,
      "currency": {
        "SGD": {
          "status": {
            "success": {
              "c": 1,
              "amt": 10
            }
          }
        }
      },
      "status": {
        "success": {
          "c": 1,
          "amt": 10
        }
      }
    }
  }
}

```

Fig. 5k

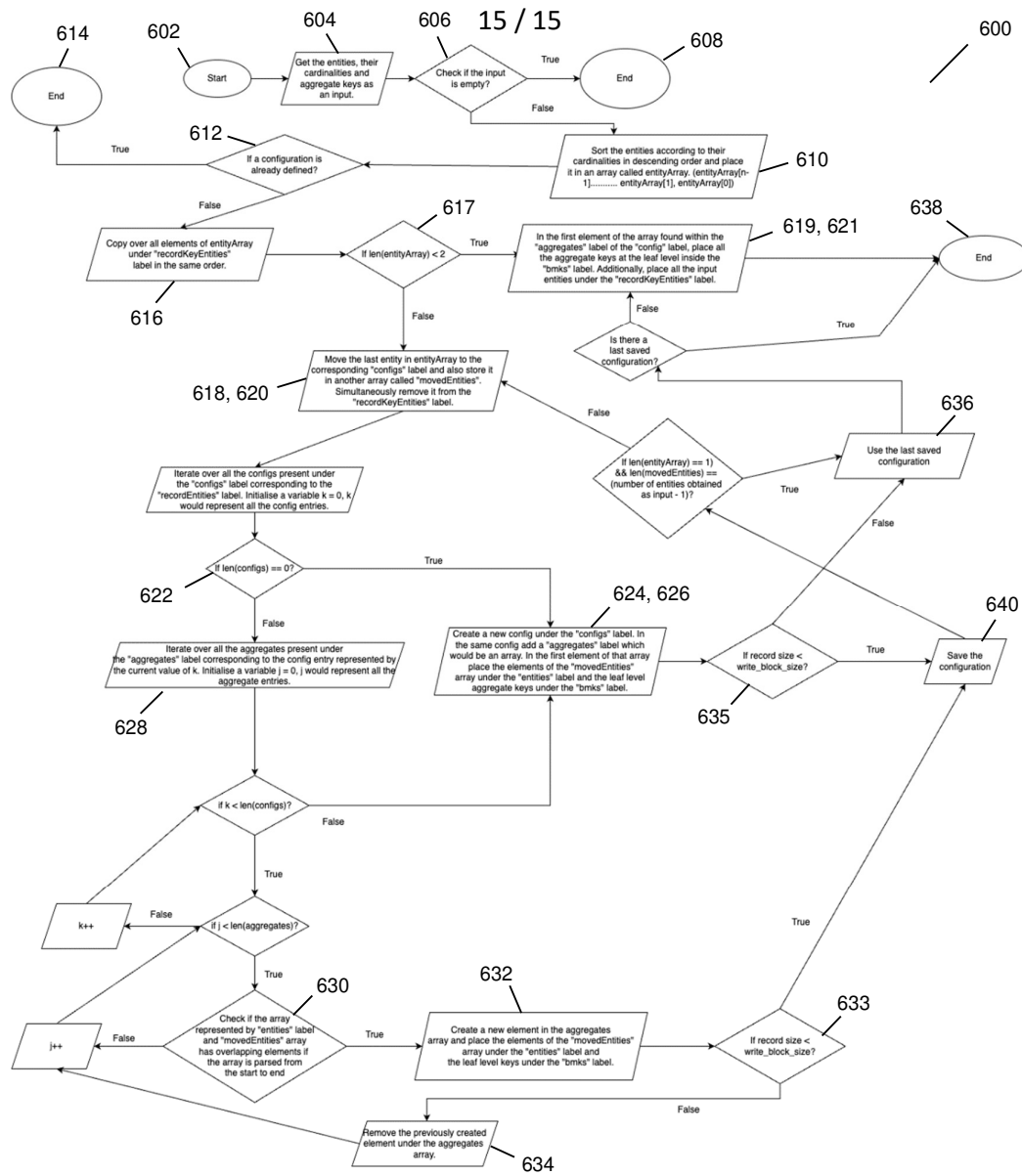


Fig. 6